



Department of  
Primary Industries  
Water

2014–15

# NSW Water Supply and Sewerage Benchmarking Report

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NSW WATER SUPPLY AND SEWERAGE

Benchmarking Report

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**BEST PRACTICE MANAGEMENT**

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (May 2016). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.



## FOREWORD

The *NSW Performance Monitoring System* (page 3) has been conceived and implemented as a ‘one stop shop’ for continuous productivity and performance improvement by the NSW local water utilities (LWUs). The System assures data reliability, minimises red tape and avoids duplication in reporting. It enables DPI Water to develop evidence based policies and guidelines for the local water utilities to improve productivity and to annually provide the required LWU data to the Australian Bureau of Meteorology (for publication in the annual *National Performance Report for Urban Water Utilities* ([www.bom.gov.au](http://www.bom.gov.au))) and the Australian Bureau of Statistics, as well as for statewide reporting such as the *NSW Performance Monitoring Report*, this *Benchmarking Report* and the reporting for *NSW 2021* and the *State of the Environment Report*.

In line with the National Water Initiative, which extends the 1994 *Strategic Framework for Water Reform* and *National Competition Policy*, the NSW government has developed the *Best-Practice Management of Water Supply and Sewerage Guidelines*<sup>1</sup>. These guidelines, which were updated in 2007, are the key driver for reform of planning, pricing and management and for continuing productivity and performance improvement by each utility through the *NSW Best-Practice Management (BPM) of Water Supply and Sewerage Framework* (page 6). The *BPM Framework* requires LWUs to undertake annual performance monitoring in accordance with the *National Water Initiative*<sup>2</sup>, with the aim of improving productivity and the quality and efficiency of services to all NSW residents. Performance monitoring is also important for public accountability and has been strongly endorsed by both the Independent Pricing and Regulatory Tribunal<sup>3</sup> and the Productivity Commission<sup>4</sup>.

This *2014-15 NSW Water Supply and Sewerage Benchmarking Report* discloses the full suite of NSW water supply and sewerage performance indicators for all NSW water utilities including Sydney and Hunter Water Corporations over the past six years, enabling each utility to monitor trends in its performance indicators and to improve its productivity and performance through benchmarking against similar utilities. Independent auditing and data validation assure data reliability of the NSW Performance Monitoring System (pages 1 and 351).

A summary of the key performance indicators for all NSW urban water utilities, together with the overall statewide performance of the NSW regional water utilities and comparison of that performance with interstate utilities, are provided in the companion report *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*.

The Benchmarking Report has been prepared by DPI Water since 1986. To facilitate comparisons, the Minister for Lands and Water has made both the performance monitoring report and the benchmarking report available on the DPI Water website ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

To provide a balanced view of the long-term sustainability of NSW water utilities, a triple bottom line (TBL) accounting focus has been adopted, with performance reported on the basis of social, environmental and economic performance indicators.

NSW performance monitoring and benchmarking also provide valuable data for continuous performance improvement by disclosing the present position and facilitating development of suitable information and evidence based responses to address the future water supply and sewerage needs for regional NSW. This ensures an appropriate focus and targeting of responses and initiatives to address current and emerging issues. Page 1 provides a summary of such information and responses.

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<sup>1</sup> *Best-Practice Management of Water Supply and Sewerage Guidelines*, Department of Water and Energy, August 2007 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

<sup>2</sup> *National Performance Framework – 2013-14 Urban Performance Reporting Indicators and Definitions*, National Water Commission/Water Services Association of Australia, June 2014 ([www.nwc.gov.au](http://www.nwc.gov.au)).

<sup>3</sup> *Pricing Principles for Local Water Authorities*, Independent Pricing and Regulatory Tribunal, NSW, 1996.

<sup>4</sup> *Australia's Urban Water Sector*, Productivity Commission Report No.55, August 2011 ([www.pc.gov.au](http://www.pc.gov.au)).

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Local Government NSW (LGNSW) is acknowledged for its strong and continuing support for the NSW annual water supply and sewerage performance monitoring system since its commencement in 1986.

The public health regulator, NSW Health is acknowledged for its oversight of drinking water quality in regional NSW, including administering the preparation and implementation of a Drinking Water Management System (*Public Health Act 2010*) by each utility providing a drinking water supply and for its contributions to Appendix E and Appendix B (sampling location and frequency). NSW Health has also provided additional water quality data (from the NSW Health Drinking Water Database) and water quality monitoring compliance data, which has been incorporated into Tables 5 and 12 and Appendices D1 and D3.

The NSW Local Government Water Directorate is also acknowledged for its strong support, contributions and feedback to facilitate ongoing review and refinement of the NSW Performance Monitoring System.

The continuing success of the NSW performance monitoring system as a robust evidence basis for productivity and performance improvement is contingent on full participation by all NSW local water utilities (LWUs). The continuing participation of each LWU in the performance monitoring system and each LWU's significant efforts in providing current, accurate and timely data on its performance for each of the past six years and in implementing the *NSW Best-Practice Management Framework* (page 6) are therefore particularly acknowledged.

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# 1 INTRODUCTION

This *NSW Water Supply and Sewerage Benchmarking Report* discloses the full suite of NSW water supply and sewerage performance indicators and benchmarking data for all NSW urban water utilities over the past six years. The data is presented in the form of 68 figures and 18 tables and provides comparative information to enable each local water utility (LWU) to improve its productivity and performance through benchmarking its performance against that of similar LWUs.

A companion report, the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* (available at [www.water.nsw.gov.au](http://www.water.nsw.gov.au)), discloses the 36 key performance indicators for the NSW water utilities together with the overall statewide performance of the NSW regional water utilities, compares that performance with interstate utilities and explains the 2014 streamlining and simplification of the *NSW Best-Practice Management (BPM) Framework*. With the exception of Appendix A, these matters are not repeated in this *Benchmarking Report*.

The NSW component of the *National Performance Report 2014-15 for Urban Water Utilities* is shown in Appendix F (page 316) of this *Benchmarking Report* while national performance comparisons are shown in Appendix A (page 204) and the characteristics of the Australian urban water sector are discussed in Appendix K (page 364). Independent auditing and validation assure data reliability (page 353).

This *Benchmarking Report* discloses the NSW results for all of the approximately 130 NWI Performance Indicators as shown in note 15 on page 35.

In addition, the Benchmarking Report is a valuable annual **resource kit** and continuous improvement tool for NSW utilities by addressing a broad range of emerging issues and suggested responses, including:

- **Data reliability** of the NSW Performance Monitoring System (pages i, 351, 353)
- **NSW 'one stop shop'** minimises regulatory burden and avoids duplication in reporting (page 3)
- Statewide and national medians (pages 105, 106, 107); water supply **system planning insights** from trends in statewide performance indicators (pages 19, 111, 113, 115)
- National Certification Framework for Treatment Works Operators (pages 36, 280, 360)
- Risk-based drinking water management system (**DWMS**) (page 9)
- Achieving **microbiological compliance** (page 10)
- Boil water alerts (page 10), **lessons learnt** (page 12), distribution system integrity (page 11, 307)
- Assuring safety and integrity of a water supply distribution system (pages 9, 305)
- Water quality sampling locations and frequency (page 235)
- Performance of each LWU's water and sewage treatment works (pages 280, 288)
- BPM (page 5), **NSW BPM Framework** (page 6) and BPM implementation (page 108)
- Cost-effective **renewals** (page 14), **infrastructure asset condition and performance** (pages 126, 130), asset rehabilitation, renewals expenditure (pages 126, 130)
- Leakage (page 15), **Non-revenue water** (NRW) in L/d/connection should be used for tracking performance over time (page 16)
- Benefits of the strong NSW **pricing signals** (page 13), achieving **full cost recovery** (page 22)
- Achieving efficient water use (page 13), total urban water supplied (page 25)
- Greenhouse gases (page 16), **NSW greenhouse gas calculator** (page 339), pollution incident response management plan (**PIRMP**) (page 288), wastewater treatment operators (pages 288, 360)
- Triple bottom line (**TBL**) **Performance Report** (pages 4, 30, 274, 276)
- **Action Plan** (pages 4, 20, 28), 'liveability', emerging issues, financial plan update (page 20)
- Improving performance (page 17), NSW Performance monitoring database (page 213)
- Economic efficiency indicators for four sizes of LWUs (page 21)
- Local Government Integrated Planning and Reporting (**IPR**) Framework, 2010 (pages 7, 8)
- **Software, guidelines, training, tools** and assistance available from DPI Water (pages 8, 9, 12, 13, 16, 22, 24, 36, 356)
- Contents of tables 5 to 18 (page 37), Characteristics of the **Australian Urban Water Sector** (364)
- General notes (page 32), rainwater tanks, liveability indicators (pages 16, 362)

## 2 NSW WATER UTILITIES

This report discloses performance indicators for all NSW urban water utilities, comprising the 105 regional local water utilities (LWUs) together with four metropolitan utilities (Sydney Water, Hunter Water, Water NSW (from January 2015, formerly Sydney Catchment Authority) and Hawkesbury Council). All utilities are listed in the table below in alphabetical order. To facilitate comparisons with similar sized LWUs, tables 5 to 18 of this report appear in order of the number of connected properties served. The number shown beside each utility in the table below indicates the relative size of the utilities on the basis of connected properties served. For example, the table shows '11 Albury City', indicating that Albury City is the 11th largest LWU. LWUs are grouped in four size ranges: over 10,000, 3,001 to 10,000, 1,501 to 3,000, and 200 to 1,500 connected properties.

**Table 1 - NSW water utilities (regional and metropolitan) in alphabetical order**

| No. | Utility                     | No. | Utility               | No. | Utility                  |
|-----|-----------------------------|-----|-----------------------|-----|--------------------------|
| 11  | Albury City                 | 84  | Gilgandra             | 83  | Oberon (R)               |
| 29  | Armidale Dumaresq           | 60  | Glen Innes Severn     | 19  | Orange                   |
| 24  | Ballina (R)                 | 28  | Goldenfields (NO SGE) | 71  | Palerang                 |
| 100 | Balranald (DS)              | 1   | Gosford               | 36  | Parkes                   |
| 21  | Bathurst Regional           | 20  | Goulburn Mulwaree     | 7   | Port Macquarie-Hastings  |
| 23  | Bega Valley                 | 80  | Greater Hume          | 17  | Queanbeyan (R)           |
| 47  | Bellingen                   | 30  | Griffith              | 33  | Richmond Valley          |
| 53  | Berrigan (DS)               | 94  | Gundagai              | 8   | Riverina (NO SGE)        |
| 72  | Bland (NO WS)               | 44  | Gunnedah              | 4   | Rous (BS) (NO SGE)       |
| 78  | Blayney (NO WS)             | 90  | Guyra                 | 3   | Shoalhaven               |
| 89  | Bogan                       | 81  | Gwydir                | 35  | Singleton                |
| 97  | Bombala                     | 76  | Harden (R)            | 52  | Snowy River              |
| 104 | Boorowa                     | 30A | Hawkesbury (NO WS)    |     | Sydney Water             |
| 87  | Bourke (DS)                 | 86  | Hay (DS)              | 13  | Tamworth Regional        |
| 105 | Brewarrina (DS)             |     | Hunter Water          | 69  | Temora (NO WS)           |
| 27  | Byron (R)                   | 37  | Inverell              | 68  | Tenterfield              |
| 91  | Cabonne                     | 106 | Jerilderie (DS)       | 93  | Tumbarumba               |
| 92  | Carrathool                  | 77  | Junee (NO WS)         | 43  | Tumut                    |
| 103 | Central Darling (DS)        | 25  | Kempsey               | 6   | Tweed                    |
| 40  | Central Tablelands (NO SGE) | 70  | Kyogle                | 45  | Upper Hunter             |
| 14  | Clarence Valley             | 59  | Lachlan               | 73  | Upper Lachlan            |
| 67  | Cobar (R)                   | 48  | Leeton                | 85  | Uralla                   |
| 66  | Cobar WB (BS)               | 22  | Lismore (R)           | 107 | Urana (NO WS)            |
| 10  | Coffs Harbour               | 31  | Lithgow               | 9   | Wagga Wagga (NO WS)      |
| 99  | Coolamon (NO WS)            | 61  | Liverpool Plains      | 88  | Wakool (DS)              |
| 50  | Cooma-Monaro                | 102 | Lockhart (NO WS)      | 98  | Walcha                   |
| 75  | Coonamble                   | 5   | MidCoast              | 79  | Walgett (DS)             |
| 58  | Cootamundra (R)             | 32  | Mid-Western Regional  | 96  | Warren (DS)              |
| 42  | Corowa                      | 38  | Moree Plains          | 55  | Warrumbungle             |
| 39  | Cowra                       | 65  | Murray (DS)           |     | Water NSW (formerly SCA) |
| 54  | Deniliquin                  | 101 | Murrumbidgee          | 95  | Weddin (NO WS)           |
| 18  | Dubbo                       | 41  | Muswellbrook          | 57  | Wellington               |
| 26  | Essential Energy            | 34  | Nambucca              | 74  | Wentworth (DS)           |
| 15  | Eurobodalla                 | 46  | Narrabri              | 16  | Wingecarribee            |
| 12  | Fish River WS (BS)          | 63  | Narrandera            | 2   | Wyong Water              |
| 51  | Forbes                      | 62  | Narromine             | 56  | Yass Valley              |
|     |                             |     |                       | 49  | Young (R)                |

R - Reticulator; DS - Dual Supply; BS - Bulk Supplier; NO WS - No water supply; NO SGE - No sewerage

## 3 NSW PERFORMANCE MONITORING SYSTEM

### 3.1 Performance reporting

Performance monitoring and benchmarking are required under National Competition Policy and the National Water Initiative, are important for public accountability and have been strongly endorsed by both the Independent Pricing and Regulatory Tribunal (IPART) and the Productivity Commission.

The State Government promotes continuous productivity and performance improvement to improve the quality and efficiency of services to the NSW community. Performance benchmarking provides valuable comparative data which enables each local water utility (LWU) to review and improve its productivity and performance by examining trends in its performance indicators and by benchmarking its performance against that of similar utilities.

The NSW Performance Monitoring System has been conceived and implemented as a **'one stop shop'**<sup>5</sup> for continuous productivity and performance improvement by the local water utilities (LWUs). The system assures data reliability, **minimises the regulatory burden and avoids duplication** in reporting. Water supply and sewerage non-financial data is obtained from each LWU's annual performance reports for their water and sewerage businesses. These reports are required to be lodged online by each LWU via the NSW Performance Monitoring Database by 15 September each year in order to meet this outcome required by the *Best-Practice Management of Water Supply and Sewerage Framework* (page 6). Financial data is obtained through the Office of Local Government from each LWU's Special Schedule Nos 3 to 7 and Notes 2 and 3 of the Special Purpose Financial Statements of their *2014-15 Annual Financial Statements* (pages 239 to 254). DPI Water obtains the water, sewerage and trade waste charges from each LWU's website. In addition to extensive independent auditing (page 353), DPI Water validates the data in order to assure data reliability (Appendix H on page 351) and provides relevant data to other Government agencies as required (i.e. to ABS, BOM and for key statewide reports including NSW 2021 and the State of the Environment Report).

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<sup>5</sup> Successful coordination and cooperation with Commonwealth agencies (ABS, BOM) has **avoided duplication in reporting**. The single data collection in the NSW Performance Monitoring System enables DPI Water to develop evidence based policies and guidelines for the LWUs to improve productivity and to:

- Annually provide the approximately 130 NWI performance indicators for the 29 eligible NSW LWUs to the BOM for publication in the National Performance Report ([www.bom.gov.au](http://www.bom.gov.au));
- Annually provide the required data to BOM and ABS; the performance indicator set has been extended by over 45 indicators to meet BOM and ABS requirements;
- Annually provide inputs for statewide reports and submissions, including the State of the Environment Report; and
- Annually prepare:
  - o The *NSW Performance Monitoring Report*, which discloses the overall statewide performance of LWUs and compares that performance with interstate utilities;
  - o This *NSW Benchmarking Report*, which has been prepared by DPI Water since 1986;
  - o A Triple Bottom Line (TBL) Report for each LWU (examples on pages 30 and 31 and pages 274 to 277); and
  - o An Action Plan template for each LWU (example on pages 28 and 29).

The Australian Bureau of Meteorology's Water Amendment Regulations 2012 (No. 1) for Category 7 have been aligned with the national performance reporting through 57 water resources performance indicators (page 19 of the *National Performance Framework* [www.nwc.gov.au](http://www.nwc.gov.au)). All Australian urban water utilities with over 10,000 connected properties are required to report mostly monthly data for those indicators. The NSW Performance Monitoring Database has been extended to enable the 29 eligible NSW LWUs to report this data through the NSW Database. To further avoid duplication, utilities which report these indicators to BOM are exempted from reporting the relevant 33 water resources indicators in DPI Water's annual data collection.

In addition, to avoid duplication of effort by LWUs and to facilitate sound planning and preparation of integrated water cycle management (IWCM) strategies by each LWU, a 20-year water supply and sewerage planning data set of 170 performance indicators has been developed with the key results reported for each LWU in the NSW Benchmarking Report and each LWU's TBL Performance Report since 1994/95. These LWU data sets will minimise the work required for assembling and analysing the necessary water supply and sewerage historical and pricing data by each LWU and are now available to each LWU on request ([urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au)). [An example data set based on the data reported by Coffs Harbour City Council can be downloaded here.](#)

### 3.2. Benchmarking

Each LWU has the opportunity to improve its performance in areas of apparent under-performance by benchmarking its key work processes in these areas with the work processes of one or two high-performing similar LWUs and implementing the best-practices thus identified. This will provide better customer service, reduced environmental impact and better value-for-money for the community.

In addition, each LWU should undertake 'Syndicate Benchmarking' of its work processes with a group of LWUs with similar characteristics. The best-practices thus identified can then be adopted by other LWUs.

### 3.3 TBL performance reports and action plans

As indicated on page 3, DPI Water provides each NSW local water utility with an annual TBL Performance Report and a template for its Action Plan to Council for its water supply business and for its sewerage business. Each TBL report is an annual "report card" which discloses the LWU's implementation of the outcomes required by the NSW Best-Practice Framework and its performance for over 50 key performance indicators together with the statewide and national medians and the LWU's relative performance against similar sized LWUs. TBL reports and action plans are discussed in section 5.4 on page 20. Example TBL reports are provided on pages 30, 274 and 276 and an example action plan is provided on page 28.

LWUs that implement the 19 planning, pricing and management outcomes required by the *Best-Practice Management of Water Supply and Sewerage Framework* will have demonstrated appropriate, affordable, cost-effective and sustainable piped water supply and sewerage services and compliance with National Competition Policy and the National Water Initiative (refer to section 4 on page 5).

To assist each LWU to gain a quick appreciation of its performance relative to similar sized LWUs, the LWU TBL Performance Report provides a ranking of each LWU's performance for each performance indicator (second shaded column). These rankings are based on the top 20% of LWUs for each indicator being ranked 1 and the bottom 20% being ranked 5 (LWUs in the range 40 to 60% are ranked 3). In addition, rankings are provided for each LWU's performance relative to all LWUs (third shaded column).

LWUs will appreciate that **each performance indicator is a 'partial' indicator only and therefore cannot be interpreted in isolation**. In addition, the rankings are indicative only and do not take into account the wide range of factors that can impact on a LWU's performance, as discussed in section 5.2 on page 17. The aim of ranking each LWU's performance is to assist the LWU in identifying any areas of underperformance in comparison with similar sized LWUs. It should also be noted that a low ranking for some performance indicators does not necessarily mean an LWU is not performing well as there are a number of factors that can impact performance as shown in section 5.2. Eg. the rankings take no account of the impact of utility characteristics (e.g. whether the water supply is fully filtered, whether the utility provides a bulk storage dam and raw water transfer mains, whether the supply is nearby good quality groundwater etc.).

The second page of the TBL reports provide graphs with the LWU's performance and the statewide median over the past 10 years for 15 key indicators (pages 31, 275, 277). These graphs enable the LWU to compare its performance with the statewide median and review trends over time for each indicator, which provide the most meaningful assessment of performance. In addition to the typical residential bill, economic real rate of return, operating cost, employees, main breaks and complaints, indicators include:

- Drought water restrictions, Incidence of unplanned interruptions and average duration of interruptions
- Peak day & peak week water supplied (kL/d/property) and average annual residential water supplied
- Water usage charge (per kL) and Residential revenue from usage charges (%)
- Non-residential sewer usage charge (per kL)
- Effluent recycled (%), Biosolids reuse (%) and sewage that complied with licence (%)
- Capital expenditure (per property)
- Net greenhouse gas emissions for water and sewerage (per property)

Each LWU needs to review its performance using its annual TBL performance reports for water supply and sewerage (pages 274 to 277) and to prepare and implement a sound Action Plan to Council (pages 28 and 29) which addresses any emerging issues following its review and update of its 30-year total asset management plan and 30-year financial plan or any areas of under-performance, as indicated in section 5.4 on page 20.

## 4 BEST-PRACTICE MANAGEMENT

### 4.1 Regulatory framework

Through Goal 21 of the State Plan NSW 2021, the NSW Government's Country Towns Water Supply and Sewerage (CTWSS) program, the Regional Water and Waste Water Backlog (RWWWB) Program, the *Local Government Act 1993* and the *Water Management Act 2000*, the Minister for Lands and Water is responsible for overseeing and monitoring the performance of NSW regional LWUs in the sustainable provision of water supply and sewerage services to the community. The aim of NSW Government policy is for NSW regional LWUs to achieve appropriate, affordable, cost-effective and sustainable water supply and sewerage services.

The State Government will continue to work with the regional NSW water utilities to ensure the community benefits from effective, sustainable and safe piped water supply and sewerage services. DPI Water oversees and monitors utility performance, provides leadership, guidance, software and training (page 9) to the utilities and is the primary regulator for the 105 regional LWUs. DPI Water provides guidance in best-practice planning, pricing, management, operation and maintenance for LWUs.

The then Minister for Energy and Utilities published the '*Best-Practice Management of Water Supply and Sewerage Guidelines*' in 2004. These guidelines consolidated a number of earlier initiatives and are the key driver for reform of planning, pricing and management and for continuing productivity and performance improvement by each utility. The guidelines involve a **locally based decision making and self-regulation regime**, with strategic oversight of LWU implementation of the 19 outcomes required by the guidelines by DPI Water. All LWUs are required to implement these outcomes (footnote 6 on page 7).

In addition, such implementation (page 108) is necessary for the eligibility of LWUs for:

1. the payment of a dividend from the surplus of their water and sewerage businesses to the Council's general revenue
2. financial assistance towards the capital cost of backlog infrastructure (as at 1996) under the CTWSS program or the RWWWB program.

The then Minister for Water Utilities published revised *Best-Practice Management Guidelines* in August 2007 in order to update the Guidelines and address the requirements of the National Water Initiative. The resulting *NSW Best-Practice Management of Water Supply and Sewerage Framework* is shown on page 6.

Utilities which have implemented all of the 19 outcomes required by the *Best-Practice Management Framework*, including a current 30-year IWCMS Strategy and financial plan, are encouraged to pay an 'efficiency dividend' from the surplus of their water supply and sewerage businesses to the Council's general revenue. Refer also to the box on page 22.



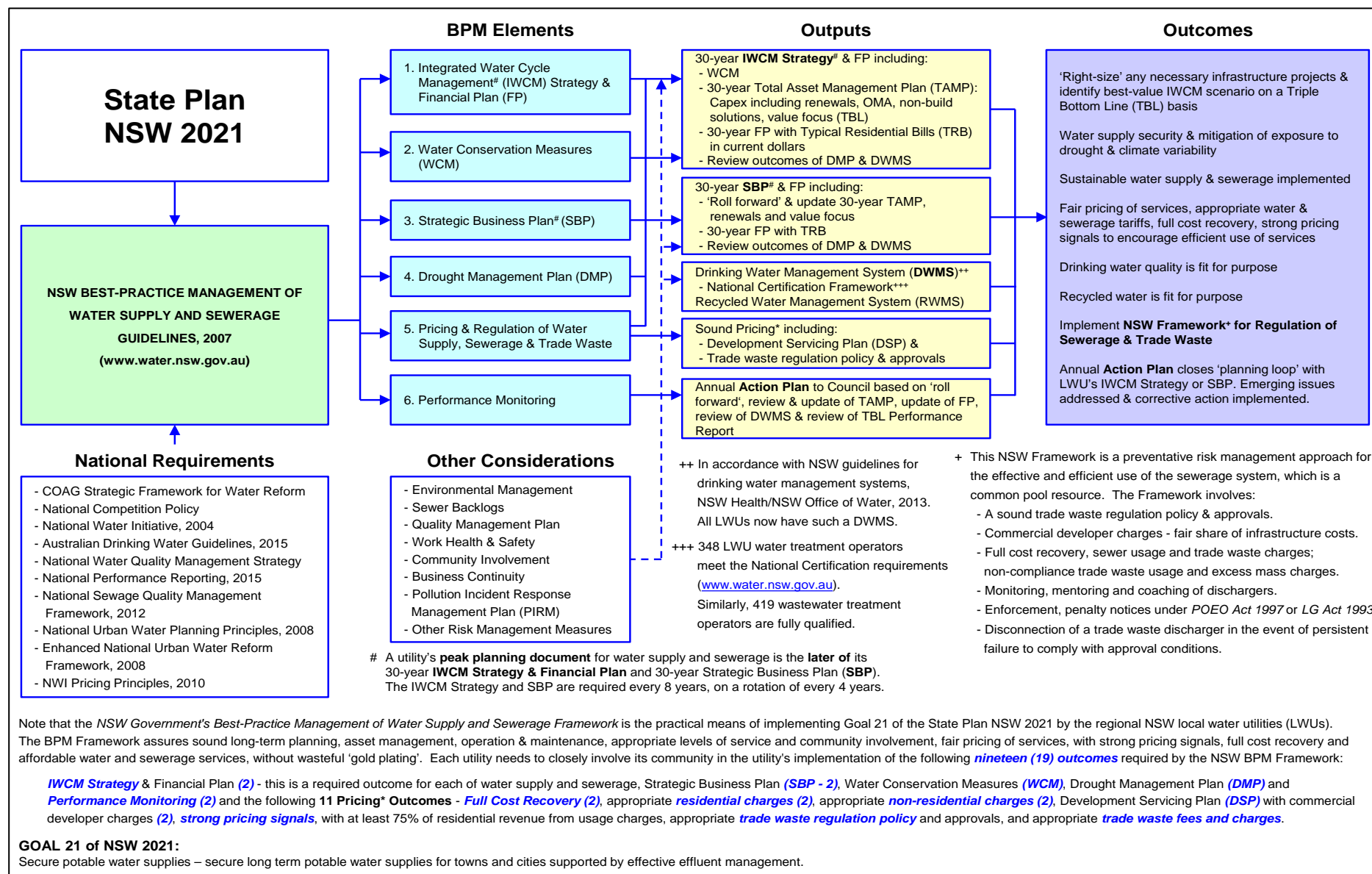


Chart 1 - NSW Best-Practice Management (BPM) of Water Supply and Sewerage Framework



## 4.2 Best-practice management framework

The *NSW Best-Practice Management of Water supply and Sewerage Framework* (page 6) drives reform of planning, pricing and management and continuing improvement in productivity and performance of water and sewerage services in NSW. The Framework identifies the key elements in the delivery of water supply and sewerage services to the community and is available on the DPI Water website ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

The *Best-Practice Management (BPM) Framework* shows that utilities which implement the Framework also implement the following national urban water requirements:

- *COAG Strategic Framework for Water Reform*;
- *National Competition Policy*;
- *Australian Drinking Water Guidelines, 2015*;
- *National Water Quality Management Strategy*;
- *The National Water Initiative (NWI), 2004*;
- *National Performance Reporting, 2015*;
- *National Sewage Quality Management Framework, 2012*;
- *National Urban Water Planning Principles, 2008*;
- *Enhanced National Urban Water Reform Framework, 2008*; and
- *The NWI Pricing Principles, 2010*.

In summary, the BPM Framework requires a LWU to prepare strategic business plans and financial plans setting out how it plans to manage these businesses over the next 30 years. This requires negotiation of appropriate levels of service with the community and development of the utility's 30-year total asset management plan (TAMP). This involves a cost-effective capital works program (without wasteful 'gold plating' (page 355)) which discloses each of the growth, improved standards and renewals components, together with a sound operation plan which includes cost-effective non-build solutions, and a maintenance plan.

The strategic business plan must include both the above 30-year TAMP and a sound 30-year financial plan which identifies the resulting Typical Residential Bill (in current dollars) over this period. Each LWU needs to prepare a 30-year strategic business plan, TAMP and financial plan in accordance with the July 2014 Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Ninety-four per cent of the NSW LWUs have now prepared such a sound strategic business plan, TAMP and financial plan (column 34 of Table 5 on page 116). These plans cover over 99% of the connected properties in regional NSW. Annual 'roll forward', review and update of the 30-year TAMP and 30-year financial plan and preparation and implementation of an annual Action Plan to Council (page 20) will ensure the long term effectiveness and sustainability of these services.

All the utilities need to implement the 19 outcomes<sup>6</sup> required by the Framework (Table 3 on page 108), which involve the following six interrelated elements:

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<sup>6</sup> Page 20 of the *Integrated Planning and Reporting Manual for local government in NSW, March 2013* ([www.olg.nsw.gov.au](http://www.olg.nsw.gov.au)) highlights the following more stringent requirements which apply for water supply and sewerage:

### **"Councils responsible for water supply and sewerage infrastructure"**

Councils that have responsibility for water supply and sewerage infrastructure need to comply with the required outcomes and timeframes of the *NSW Government's Best-Practice Management of Water Supply and Sewerage Guidelines, 2007*. These required outcomes include:

- Preparing and implementing a 30 year Integrated Water Cycle Management (IWCN) Strategy
- Preparing and implementing a 20-30-year Strategic Business Plan, Financial Plan and associated asset management plans
- Annual Performance Monitoring, including preparing an annual Action Plan to review the council's performance and to identify and address any areas of under-performance. The review also includes whether the current Typical Residential Bill is in accordance with the projection in the Strategic Business Plan and any proposed corrective action.

The development of both the IWCN Strategy and the Strategic Business Plan require significant community involvement. Further information on these required outcomes is available from the DPI Water website [www.water.nsw.gov.au](http://www.water.nsw.gov.au).

- (1) Integrated water cycle management
- (2) Water conservation and demand management
- (3) Strategic business planning
- (4) Drought management
- (5) Pricing and regulation of water supply, sewerage and trade waste
- (6) Annual performance monitoring.

As set out in Appendix H of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), the NSW Best-Practice Management Framework has been streamlined in order to minimise the regulatory burden and the cost to LWUs, without diminishing effectiveness or efficiency in achieving the outcomes required by the BPM Framework. This has resulted in deletion of 9 documents previously required over an 8 year cycle. However, the analysis and responses required for the deleted documents have been subsumed into the IWCM Strategy and Financial Plan and the Strategic Business Plan (SBP) and Financial Plan, which will now need to be prepared every 8 years on a rotation of every 4 years (Chart 2).

A LWU's **peak planning document** for water supply and sewerage is the **later of** its 30-year **IWCM Strategy and financial plan** and 30-year **SBP and financial plan**.

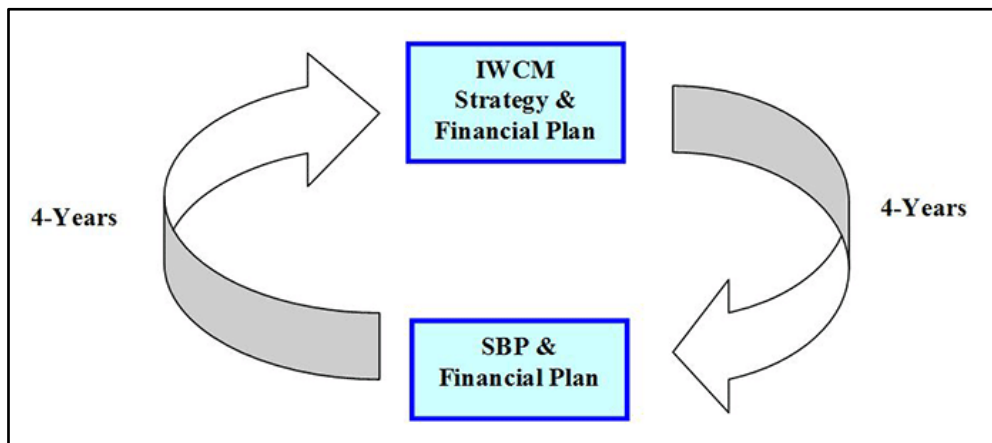


Chart 2 - Preparation timing of IWCM strategy & financial plan and SBP & financial plan

The reported LWU implementation of each outcome required by the Framework is shown in Table 3 on page 108 of this report and the overall level of implementation is shown in column 33 of Table 5 on page 116. A summary of LWU implementation is provided in the *2014-15 NSW Performance Monitoring Report* (page 23 and Figures 21, 22 and 23). Particular attention is required for strategic business planning and financial planning (column 34 of Table 5 on page 116), full cost recovery (columns 29 and 30 of Table 5 on page 116, page 22), residential water supply revenue from usage charges (column 3 of Table 5 on page 116 and Figure 13 on page 51), non-residential sewer usage charges (column 3a of Table 7 on page 146 and Figure 44 on page 81), liquid trade waste fees and charges (column 2 of Table 7C on page 153 and Figure 45 on page 82), trade waste regulation policy and approvals (columns 1 and 3 of Table 7C on page 153), and an IWCM Strategy and financial plan (columns 20 and 21 of Table 8C on page 163).

As noted on page 24 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*, future IWCM Strategies will need to be in accordance with the July 2014 IWCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) and to include assessment of the secure yield of the utility's water supply in accordance with new climate variability guidelines.

The *Local Government Integrated Planning and Reporting (IPR) Framework, March 2013* (footnote 6 on page 7) has been designed to complement and avoid duplication with the *Best-Practice Management of Water Supply and Sewerage Guidelines*. The inter-relationship of the IPR Framework with the BPM Framework is shown on pages 4, 95 and 99 of the *NSW Water and Sewerage Strategic Business Planning Guidelines, July 2011* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Refer also to pages 106 and 111 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

### Software, guidelines and training

DPI Water provides comprehensive software, guidelines and check lists (pages 7 and 8) to assist LWUs in developing appropriate water supply and sewerage strategic business plans (page 7), financial plans (page 7), community involvement<sup>7</sup>, pricing (pages 7 and 358), including water supply tariffs (page 358), sewerage tariffs (page 358), liquid trade waste fees and charges (page 358), developer charges (page 358), total asset management plans (TAMP - capital works plan, operation plan including non-build solutions and a maintenance plan (page 7)), asset valuation<sup>8</sup>, integrated water cycle management (IWCM) strategies (page 8), water conservation and demand management (page 358), drought management (page 358), assessing future urban water security<sup>9</sup> (page 359), greenhouse gas calculation (page 339) and trade waste regulation policies (page 358).

The NSW Government also provides **nationally certificated training** (page 36) for water utility operators in water treatment, wastewater treatment, fluoridation, dam safety inspection and trade waste regulation ([www.water.nsw.gov.au](http://www.water.nsw.gov.au); [urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au) or (02) 9842 8508). Training courses on assuring the safety of water supply distribution systems, water treatment operation for engineers and risk management for water recycling projects are also provided.

In addition, the NSW Government provides **update seminars** in water treatment, wastewater treatment, trade waste regulation and best-practice management for updating employee training and skills, which is required at least every 3 years ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

## 4.3 Managing drinking water quality

In regional NSW, the public reticulated water supply and sewerage services are the most important factor in protecting public health.

### Risk based drinking water management system

**A safe and reliable drinking water supply is the most essential and critical public health service provided by a Local Water Utility (LWU) to its community.** 99.9 per cent of the 19,400 regional NSW samples tested for *E. coli* in 2014-15 complied with the *Australian Drinking Water Guidelines 2011* (ADWG), (column 9 of Table 5 on page 116, column 71 of Table 12 on page 183, Figure 17 on page 55 and Appendix D1 on page 280).

The risk of contamination of public water supplies due to system integrity failure remains the dominant cause. This can be seen in the table on page 12, which indicates that 86% of the 22 boil water alerts issued by LWUs over the period May 2006 to June 2008 were due to system integrity breaches.

Table 12 on page 183 shows that all 95 LWUs providing a drinking water supply have a risk-based drinking water management system (DWMS), 2 of which have had their system externally assessed. Each DWMS needs to comply with the *NSW guidelines for drinking water management systems*, NSW Health and Office of Water, 2013. Such systems should include reference to sound standard operating procedures (SOP) in accordance with the 3rd paragraph of the box on page 10.

<sup>7</sup> NSW Water and Sewerage Community Involvement Guidelines – Consultation draft, October 2012, NSW Office of Water (available on request from [urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au)).

<sup>8</sup> NSW Reference Rates Manual for Valuation of Water Supply, Sewerage and Stormwater Assets, 2016, DPI Water ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

<sup>9</sup> Assuring future urban water security: Assessment and adaptation guidelines for NSW local water utilities, NSW Office of Water, Draft – December 2013 (available on request from [urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au)).

<sup>10</sup> While a boil water alert will be necessary to protect the community, for example if a LWU's raw water sources become highly turbid due to major flooding, 86% of recent boil water alerts in regional NSW were found to be due to avoidable system integrity breaches (page 12). LWUs need to follow the NSW Health response protocol if *E. coli* bacteria is found, or if there is failure of the disinfection system, or disinfection is otherwise ineffective e.g. due to poor treated water quality. (<http://www.health.nsw.gov.au/environment/water/Pages/nswhrp-microbiological.aspx>).

### Australian Drinking Water Guidelines (ADWG) 2011

All NSW water supply utilities have now prepared (page 183) a risk-based drinking water management system (DWMS) in accordance with the *NSW guidelines for drinking water management systems*, NSW Health and Office of Water, 2013. Annual review of your DWMS is required (page 20).

A **high priority** for each NSW local water utility is to provide a drinking water supply which:

1. Complies with ADWG for microbiological quality (health related).
2. Complies with ADWG for chemical quality (health related).
3. Maintains the microbiological<sup>6</sup> and chemical drinking water quality through providing appropriate water supply, treatment & distribution infrastructure and carrying out necessary operation and maintenance activities in accordance with sound standard operating procedures (SOP). These include adjusting treatment processes in response to changes in raw water characteristics and regular inspections of service reservoirs in order to detect and repair any defects in the reservoir roof, wall or vermin proofing which may allow contamination of the stored water by birds, wasps, vermin, animals and windborne contaminants (pages 11, 12 and 310).
4. Maintains effective disinfection and the integrity of the utility's water supply distribution systems in accordance with Circular LWU 18 of June 2014 (page 305). The LWU needs to provide a Summary Report to DPI Water (page 315) following its detailed investigation of the integrity of each of its water supply distribution systems.

Guidance on items 3 and 4 above is provided in Appendix E on page 305, which sets out a robust basis for assuring the safety of a water supply. Each LWU needs to ensure that the standard operating procedures (**SOP**) for its water supply systems **meet** the minimum monitoring **requirements in Appendix E** for ensuring effective disinfection of the source water and assuring the integrity of its distribution system in order to prevent contamination of the supply.

In view of their importance for ensuring public health protection, any failures to achieve microbiological compliance in the last 2 financial years or any 'boil water alerts' in the last 18 months, the corrective action implemented and whether it was successful must be reported in your LWU's annual Action Plan to Council (note 4 on page 29). Refer also to page 24.

Assistance available: [urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au) or Manager Water and Sewerage on (02) 9842 8495 or your Regional Water and Sewerage Treatment Officer (refer to page 36).

### Boil water alerts and lessons learnt

Information provided by the Water Unit of NSW Health has revealed that 22 boil water alerts were issued by LWUs between May 2006 to June 2008 (refer to the table on page 12). The vast majority of these alerts were due to system integrity breaches, which resulted in failure of the water utility to meet the microbiological water quality requirements of ADWG. The alerts were issued by LWUs of all sizes, with ten alerts issued by LWUs with over 10,000 connected properties, three by utilities with 3,001 to 10,000 properties and nine by utilities with under 3,000 properties. A total of 24,500 people (1.4 per cent of the 1.8 million people served) were affected by the boil water alerts.

Photos 1 to 5 on page 11 show examples of failure of distribution system integrity in regional NSW.

However, it is acknowledged that 14% of the alerts were due to pumping of highly turbid raw water during flooding, which was mostly beyond the control of the LWU, unless the LWU had access to alternate water sources, or had imposed water restrictions on residents to allow it to avoid pumping during such floods.

The lessons on page 12 have been integrated into the guidance in Appendix E on Page 305 to provide a robust basis for assuring the safety of a water supply. As noted in the box above, each LWU needs to ensure that the standard operating procedures (**SOP**) for its water supply systems **meet** the minimum monitoring **requirements in Appendix E** for ensuring effective disinfection and assuring the integrity of its distribution systems in order to prevent contamination of the supply.



## Examples of Failure of Integrity of Distribution Systems

**Photo 1** shows the **hatch** of a 20m high service reservoir, which has inadvertently been **left open** for a few weeks. The result was repeat detections of *E. coli* in the reticulated water supply and the need to issue a boil water alert.



Photo 1 - Service reservoir hatch left open

**Photos 2 and 3** are underwater photos in the above service reservoir showing evidence of contamination by birds - **bird eggs & dead birds**.

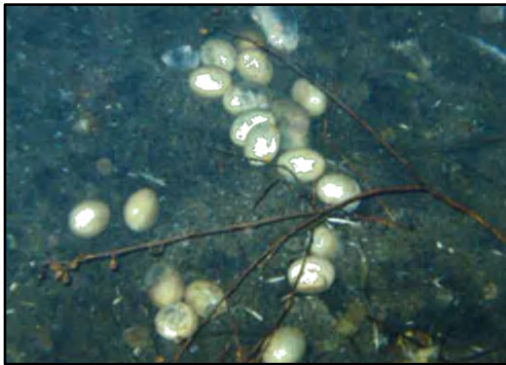


Photo 2 - Bird eggs in reservoir

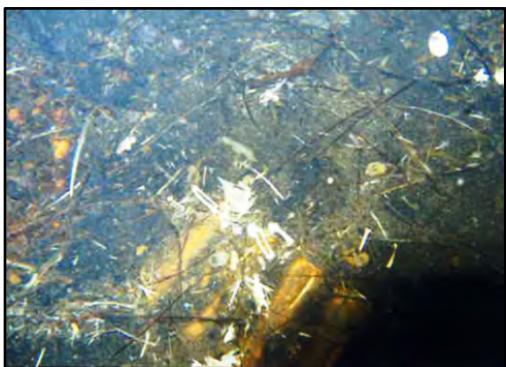


Photo 3 - Dead birds in reservoir

**Photo 4** is a service reservoir where the **mesh openings** are **too large** and the roof design is deficient, allowing the entry of small birds, rainwater and windblown material to contaminate the stored water. The reservoir roof needs to be modified so that roof runoff and windblown material cannot contaminate the stored water. **Photo 5** shows mesh openings that are also too large,

allowing entry of vermin, such as wasps and windblown material.



Photo 4 – Deficient reservoir roof design



Photo 5 - Large mesh openings on reservoir

The continued detection of *E. coli* in reticulated water supplies and boil water alerts in 2012 and 2013 have highlighted the need for a strategic approach for assuring the integrity of the distribution system to prevent contamination of a water supply that has been effectively disinfected. The recommended approach in Appendix E on page 305 was developed by DPI Water and NSW Health in consultation with the NSW Water Directorate and LWUs to provide a robust basis for assuring the safety of a water supply. As noted in the box on page 10, each LWU needs to review its present standard operating procedures (SOP) to ensure they address the minimum requirements in Appendix E for achieving safe water supplies:

Barrier 1 – **Effective disinfection** to kill, inactivate or remove pathogens in the water supply prior to distribution.

Barrier 2 – Ensure **distribution system integrity** to prevent contamination.

Barrier 3 – **Maintain free chlorine residual** in the water in the distribution system where practicable, to help protect against minor contamination and as an indicator of a potential breach in distribution system integrity.

## Summary of boil water alerts in regional NSW – May 2006 to June 2008

| No. of alerts | Reason for alert  |
|---------------|---|
| 17            | Defects in the reservoir roof, wall or bird proofing which allowed bird entry through gap in reservoir roof or windblown material to contaminate the treated water. |
| 3             | Highly turbid raw water, no filtration plant, ineffective disinfection. <sup>11</sup>   |
| 1             | Failure to properly clean and disinfect the main after replacement of valves and fittings.  |
| 1             | Backflow in the mains due to inadequate backflow prevention device.   |

### Notes:

1. The information in the above table was provided by NSW Health's Water Unit or obtained by DPI Water from the relevant LWU.
2. Duration of boil water alerts generally ranged from two days to 25 days with a median of nine days.
3. Total population affected by the 22 boil water alerts was 24,500.

These incidents highlight that 86% of the alerts were due to breaches in distribution system integrity such as the entry of birds or windblown material through **defects in the reservoir roof, wall or bird proofing**. They also show that a number of LWUs have been using reactive measures to protect public health. Preventive management in accordance with Appendix E provides a robust basis for assuring the safety<sup>10</sup> of a water supply and would have avoided the need for 86% of the above boil water alerts.

A number of important lessons have been learnt from the above boil water alerts as tabulated below:

### Lessons learnt<sup>12</sup> from boil water alerts

| Practices                          | Lessons  |
|------------------------------------|--|
| Management                         | <ul style="list-style-type: none"> <li>Carry out regular preventative maintenance and calibration of chlorinators and associated equipment.</li> </ul>   |
| Disinfection                       | <ul style="list-style-type: none"> <li><b>Ensure effective disinfection of the source water</b> prior to distribution.</li> <li>Continuous monitoring<sup>13</sup> of the chlorination system to warn of any interruptions/failures of the chlorinator.</li> <li>Carry out chlorine demand tests on a regular basis and after a change in raw water characteristics; adjust chlorine dosage as necessary.</li> </ul>   |
| Storage (service reservoirs/tanks) | <ul style="list-style-type: none"> <li>Ensure entry hatches to service reservoirs are secure and that hatches are not left open; particular care is required if third parties (e.g. telephone companies) have been given access to your LWU's reservoirs.</li> <li>Regular physical inspection is essential in order to <b>detect</b> and <b>repair</b> any design deficiencies (eg. photos 4 and 5 on page 11) or <b>defects in the reservoir roof, wall or bird proofing</b> of each reservoir. Early repairs must be effected to correct any defects and <b>prevent contamination</b> of the stored water by birds, vermin or windblown material (pages 310, 315).</li> </ul> |
| Free chlorine residual             | <ul style="list-style-type: none"> <li><b>Maintain a minimum free chlorine residual of about 0.2 mg/L</b> throughout the water supply distribution system<sup>14</sup> (including extremities where practicable).</li> </ul>   |
| Backflow prevention                | <ul style="list-style-type: none"> <li>Ensure appropriate backflow prevention devices are installed and are properly maintained (including any rain water tanks used for toilet flushing).</li> </ul>  |
| Source monitoring                  | <ul style="list-style-type: none"> <li>Monitor the raw water regularly and after storm events for evidence of changes in colour or turbidity.</li> <li>Chlorine demand tests should be carried out on a regular basis.</li> <li>Adjust chlorine dosing as necessary.</li> </ul>  |

<sup>11</sup> Guidance on ensuring effective disinfection and assuring the integrity of the distribution system to prevent contamination of the supply is provided in Appendix E on page 305. This guidance incorporates the above lessons.

<sup>12</sup> The above lessons include learnings from the investigation of several boil water alerts in 2012 and 2013. The investigations have identified instances of bird droppings on reservoir roofs contaminating the stored water through unplugged drill holes in the reservoir roof and windblown material 306, each LWU should **within the next 12 months physically inspect** each reservoir roof, wall and bird proofing using lifting equipment in order to identify and repair such defects and provide a Summary Report (page 315) on findings and the corrective action implemented. This action is essential in order to proactively assure distribution system integrity and to prevent contamination of the water supply.

<sup>13</sup> Monitoring requirements must be clearly documented in each LWU's Drinking Water Management System with appropriate responsibility & authority assigned to suitably **trained officers**. Refer to Appendix E on page 305, section 6.2 on page 36 & page 24.

<sup>14</sup> Maintaining such a **chlorine residual** is Barrier 3 in the recommended **multi-barrier approach** for assuring drinking water quality (page 312).

## Outcomes of reservoir and distribution system integrity inspections

The following 23 LWUs have provided DPI Water with a Summary Report (refer to page 315) on the outcomes of their examination and rectification of deficiencies in reservoir and distribution system integrity pursuant to Circular LWU 18 (page 305).

Armidale, Bogan, Bourke, Brewarrina, Cooma Monaro, Coonamble, Dubbo, Gilgandra, Kempsey, Lismore, MidCoast Water, Nambucca, Narromine, Orange, Rous Water Shoalhaven, Singleton, Tenterfield, Walcha, Warren, Warrumbungle, Wingecarribee and Wyong.

Armidale, Rous and Wingecarribee have rectified the identified deficiencies and the remainder have scheduled the necessary corrective action in their short term work plan.

## 4.4 Achieving efficient water use

Achieving efficient water use is a key responsibility for each water utility. As shown on page 9 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* (available at [www.water.nsw.gov.au](http://www.water.nsw.gov.au)) and Figure 33 on page 111, the regional NSW utilities have reduced the average annual residential water supplied per property by 50 per cent over the past 24 years. Refer also to Figure 26 on page 64.

Many LWUs have reduced their average annual residential water supplied by over 50 per cent over this period through community education, water conservation, water efficient appliances and providing appropriate pricing signals to encourage efficient water use. In particular, as shown on graph 3 on page 205 and Figure 12 on page 50, the first step water usage charge has risen to 226 c/kL. This provides a strong pricing signal and is among the highest of all the other Australian utilities.

LWUs are reminded that Circular LWU 11 of March 2011 (refer also to the box on page 22) has removed the need for use of inclining block tariffs by LWUs. **The NSW Government encourages<sup>15</sup> LWUs to use a 2-part tariff with a uniform water usage charge per kL for all water use.** IPART has implemented such tariffs for Sydney, Hunter, Gosford, Wyong and Essential Energy.

The median revenue from residential water usage charges was 72 per cent (Figure 13 on page 51). However, affordability has been maintained through the \$593 (Jan 2016\$) water Typical Residential Bill, which has increased by only 18% in real terms over the past 20 years (graph 5 on page 206).

The strong pricing signals provided by the NSW LWUs have enabled them to avoid over \$1B in capital expenditure over the last decade for augmenting water supply headworks and treatment capacity and the associated increases in their typical residential bills. The strategic benefits of the strong pricing signals implemented by the NSW water utilities are highlighted on page 5 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* (available at [www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

Any LWU which is not achieving the required revenue from residential water usage charges (column 3 of Table 5 on page 116) should develop an appropriate tariff in order to provide the necessary pricing signals to its customers and achieve the above benefits of efficient water use in its area. LWUs also continue to need to achieve full cost recovery (box on page 22 and column 29 of Table 5 on page 116). Assistance is available from DPI Water ([Dilip.Dutta@dpi.nsw.gov.au](mailto:Dilip.Dutta@dpi.nsw.gov.au) or (02) 9842 8499).

The peak day water supplied per property is shown on page 46, Figure 33c on page 111 and on each LWU's TBL Performance Report (graph 33c on page 31). Figure 33c on page 111 shows a 61% reduction in the statewide median peak day water supplied per connected property over the past 15 years. This can provide major cost savings through avoiding or deferring the need to augment the capacity of water treatment works, service reservoirs, pumping stations and trunk mains. Refer to section 5.3 on page 19.

## 4.5 Asset management

### Infrastructure Renewals

As noted on page 7, assessment of infrastructure renewals requirements is a critical element of a utility's asset management plan, which must be documented in the utility's 30-year strategic business plan and

<sup>15</sup> Refer to page 15 of the NSW Government's submission of May 2011 on the Productivity Commission Draft Report 'Australia's Urban Water Sector, April 2011' (available at [www.pc.gov.au](http://www.pc.gov.au) and [www.water.nsw.gov.au/urban-water/default.aspx#draft](http://www.water.nsw.gov.au/urban-water/default.aspx#draft)).



financial plan. Details of each LWU's asset rehabilitation activities and renewals expenditure are provided in Tables 10 and 15 on pages 172 and 192 respectively, as well as Tables 5C and 5D on pages 126 and 130. These are also shown on notes 9 and 10 respectively of each LWU's Water and Sewerage TBL Reports (pages 274 and 276).

Renewals programs for LWUs vary in complexity from a reactive approach (no renewals, repairs (maintenance) undertaken as required) to development of a comprehensive total asset management plan (TAMP). A TAMP is essential as it forms the foundation for a LWU's 30-year strategic business plan. LWUs therefore need to continue to develop and annually update their TAMP and financial plan.

As noted on page 7, the 30-year TAMP comprises an operation plan, which includes cost-effective non-build solutions, a maintenance plan and a capital works plan (involving works for improved levels of service, works to service growth and a **30-year renewals plan**<sup>16</sup>).

For a water supply distribution system, for example, an operation plan would be required as part of the LWU's risk management. The operations review needs to include:

- **An economic analysis** – identifies pipelines where renewal is more economic than continuing with repairs. Takes into account the impact of pipe failure (e.g. failure of a pipeline in the CBD has more impact than failure of a pipeline on the outer edge of the system).
- **A reliability analysis** – identifies pipelines where renewal is required for reliability (to ensure performance requirements with regard to supply interruptions can be achieved).
- **A capacity review** – identifies pipelines where augmentation or replacement is required (to maintain the required pressure or flow).
- **A leakage analysis** – identifies whether leakage reduction is economically warranted.

The driver of renewals expenditure is the ability to cost-effectively meet the LWU's performance requirements, i.e. the levels of service and the associated Typical Residential Bill (TRB) negotiated with the community. Other relevant considerations are the condition and age of the assets.

For water supply and sewerage, it is misleading to measure annual renewals expenditure on the basis of a percentage (say 1 or 2 per cent) of the current replacement cost of assets. Rather, the bulk of renewals expenditure will be required towards the end of the economic life of an asset (e.g. a new water main with an economic life of 80 years would be expected to have minimal renewal expenditure before year 80). Therefore, LWUs should ensure that their 30-year financial plan includes capital expenditure, including renewals, identified in a soundly based total asset management plan<sup>17</sup>. They should also annually 'roll forward', review and update their 30-year TAMP for projects completed, modified or deferred and input the results, together with their latest annual financial statements to prepare an update of their 30-year financial plan. Any warranted corrective actions, including those from the review of the LWU's DWMS and any Section 61 Reports needs to be included in the LWU's annual Action Plan to Council (page 20).

Funding in the financial plan involves an appropriate mix of the utility's annual income, accumulated cash and investments and borrowings. As noted on page 23, your LWU's Action Plan must report on whether the Typical Residential Bill (TRB) is consistent with the projection in the later of your LWU's 30-year strategic business plan and financial plan and 30-year IWCM Strategy and financial plan.

As shown on page 59 and graph 10 on page 207, water main breaks for NSW LWUs have remained much lower than all the other states and metro utilities, indicating good water main asset condition.

Further information on the development of a cost-effective asset renewal plan can be obtained from DPI Water ([Dilip.Dutta@dpi.nsw.gov.au](mailto:Dilip.Dutta@dpi.nsw.gov.au) or (02) 9842 8499). Information on asset valuation and economic life can be obtained from the 'NSW Reference Rates Manual for Valuation of Water Supply, Sewerage and Stormwater Assets', 2016 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) and broad guidance on asset management is provided in section 10 of the *NSW Water and Sewerage Strategic Business Planning Guidelines*, NSW Office of Water, July 2011 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

<sup>16</sup> DPI Water will be preparing tools and guidance materials on identifying and implementing a cost-effective & robust 30-year renewals plan. Refer also to Item 7F of the July 2014 Strategic Business Planning Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

<sup>17</sup> Refer to pages 84 and 85 of the *2010-11 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).



## Leakage

Water leakage and apparent losses are often poorly defined and poorly understood and, in general, water utilities have a relatively limited awareness of the true value of these two parameters within their water supply systems. The International Water Association (IWA) has adopted the following terminology:

- **Real losses** are physical water losses from the potable water supply distribution system up to the point of customer metering. They can occur through leaks, bursts and reservoir overflows. Recent LWU results are shown in column 41e of Table 10 on page 172 and Table 10A on page 175.
- **Apparent losses** reflect errors in measurement and/or the documentation process. They generally consist of customer use which is not recorded due to metering error (mostly under-registration of worn customer meters), incorrect assumptions of unmeasured use or unauthorised consumption (illegal use). (Refer to columns 4 to 6 of Table 8A on page 159).
- **Water losses** = Real Losses (mostly leakage) + Apparent Losses (meter errors, illegal use).
- **Non-revenue water (NRW)** consists of Water Losses plus unbilled authorised consumption (column 41f of Table 10 on page 172, column 9 of Table 8 on page 155 and Figure 29 on page 67. Unbilled authorised consumption (column 8b of Table 8 and column 9 of Table 8A on page 159) may or may not be metered and may include firefighting and mains flushing. Any watering of parks and gardens (column 6 of Table 8) should be metered and billed by each LWU.

Leakage management is an essential element of asset management. Leakage cannot be totally avoided due to the large no. of service connections in a water supply network (column 18a of Table 9 on page 169). Small 'weeps' in connections result in unavoidable losses and these losses increase with higher system pressure.

Leakage and water losses have historically been reported as a percentage of water supplied. Although this identifies the significance of these parameters in relation to the total water supplied, it is not helpful in monitoring the effectiveness of a utility's performance in reducing losses and is perversely affected by reductions in water consumption and water restrictions due to drought. In addition, these indicators do not measure the efficient management of leakage in a distribution system because they take no account of multiple properties, density of service connections (Indicator WB30 on page 213), length of mains, customer meter location in relation to the property boundary or the operating pressure. Water loss in L/d per connection is recommended by IWA as the best traditional basic technical indicator for real losses, although it does not account for other factors such as length of main or operating pressure. In particular, reductions in operating pressure have been shown to greatly reduce system leakage.

The Infrastructure Leakage Index (ILI) has been proposed as an indicator which measures how effectively real losses are being managed at the current operating pressure while accounting for other influential factors such as length of mains, number of service connections and customer meter location. The ILI is calculated from the ratio of the Current Annual Real Losses (CARL) to the Un-Avoidable Real Losses (UARL). CARL is the annual real losses divided by the number of service connections and percent of time the system is under pressure. UARL is a function of length of mains, number of service connections and average system pressure.

An ILI of 1.0 indicates that only unavoidable losses are occurring and that optimum leakage management is in place. There is of course a significant cost associated with operating a system with an ILI of 1.0 and this may not be warranted. An ILI of less than 1.0 is meaningless. When interpreting ILI data it should be noted that many of the inputs are imprecise. While an ILI of 2.2 appears to be better than one of 2.5, in practice it is likely both represent similarly well managed systems.

The ILI is recommended by the International Water Association for international comparisons of water utilities. The National Performance Framework ([www.nwc.gov.au](http://www.nwc.gov.au)) has adopted the ILI as a measure of leakage (NWI Indicator A9) and DPI Water has reported the ILI for each LWU since 2005-06 (column 41b of Table 10 on page 172). DPI Water will also continue to report **leakage as L/d per connection** (the relevant measure for utilities with over 20 connections/km, which is the vast majority of NSW LWUs) (column 41 of Table 10 on page 172, Figure 28 on page 66), which is the best measure **for tracking a LWU's leakage performance over time**. This indicator (A10) is also preferred in the National Performance Framework. Similarly, as indicated in note 9 on page 33, **Non-Revenue Water (NRW)** in L/connection/d) should be used for tracking a utility's performance over time. Refer also to column 41f of Table 10 on page 172 and Figure 29 on page 67.

Analysis by the International Water Association has demonstrated that the Australian urban water utilities (based on results reported in the National Performance Report 2007-08 for urban water utilities) are by far<sup>18</sup> the best performing urban water utilities in the world for minimising leakage and real losses.

The statewide median real water loss is 60 L/connection/d, which is lower than the national Median of 76 L/connection/d (page 119 and Figure 28 on page 66 and page 208). As shown in Table 10 on page 172, 74 LWUs have recently carried out water loss management, including leakage testing, analysis and leakage reduction. The Regional NSW Water Loss Management Program (Table 10A on page 175) has resulted in reductions in the average water losses for the 68 participating LWUs from 154 to 92 L/connection/d, or from 16% to 10% of the potable water supplied, a total saving of 5,500 ML/a. Real water losses 'before' and 'after' the Regional NSW Water Loss Management Program are shown in columns 8 to 13 of Table 10A on page 175 for each of the 68 LWUs.

### Greenhouse gases

The National Water Initiative requires LWUs to report both direct and some indirect greenhouse gas (GHG) emission estimates (columns 35a to 35d of Table 5B on page 123 and pages 115 and 277). The **NSW greenhouse gas calculator** has been developed by DPI Water to assist LWUs. The calculator has been provided to all LWUs, as well as to interstate utilities, and is included in **Appendix G** on page 339. Direct emissions are produced from sources within the boundary of an organisation and as a result of that organisation's activities. Direct emissions mainly arise from the following activities:

- Generation of energy, heat, steam and electricity.
- Manufacturing processes.
- Transportation of materials, products, waste and people.
- Fugitive emissions (eg. Intentional or unintentional emissions from natural gas leaks, joints and seals).
- On-site waste management such as emissions from landfill sites.

Eg. LWUs with a car fleet should report emissions – petrol used in those vehicles as direct emissions.

Emission factors for calculating direct emissions are generally expressed in the form of mass of GHG emitted per unit of energy (kg CO<sub>2</sub>/GJ). Factors are used to calculate GHG emissions by multiplying the factor (e.g. kg CO<sub>2</sub>/GJ energy in petrol) with activity data (eg. kL x energy density of petrol used).

Indirect emissions are emissions generated in the wider economy as a consequence of the LWU's activities, but which are physically produced by the activities of another organisation (eg. off-site waste disposal).

Emission factors and examples of the calculation of GHG emissions are provided by the Department of Climate Change and Energy Efficiency – National Greenhouse Accounts (NGA) Factors (<http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx>).

It is noted that many opportunities for reducing greenhouse gas emissions are often missed because their financial attractiveness is masked by not considering their full costs and benefits.

### Rainwater Tanks and Water Sensitive Urban Design

Appendix J on page 362 shows a total of 39,000 residential rainwater tanks reported by 33 LWUs. The typical rainwater tank volume is 3 to 5 kL. The ten LWUs which reported at least 1,000 rainwater tanks were Wyong (10,000), Gosford (9,032), Singleton (2,149), Bega Valley (1,800), Tweed (1,873), Coffs Harbour (1,886), Mid-Western Regional (1,588), Gwydir (1,500), Armidale (1,342) and Young (1,000).

In 2014-15, 17 LWUs released a total of 2,200 water sensitive urban design (WSUD) residential lots, compared to a total of 1,700 in 2013-14.

In addition, Appendix J shows the 20 LWUs which have a Regional Development Control Plan which requires 'liveable towns and cities' development or WSUD for new developments. Appendix J also shows that 216km of stormwater channels are managed under WSUD principles.

<sup>18</sup> Alan Lambert "The Future of Leakage Indicators" presentation to the National Performance Report 2008-09 Definitions Review and Planning Workshop, 11 February 2010.

## 5 IMPROVING PERFORMANCE

### 5.1 Performance review

A utility's **overall aim** for its water supply and sewerage businesses should be to provide value for money for its community by delivering the levels of service negotiated with the community at the lowest sustainable Typical Residential Bill (TRB). This is done through sound planning, pricing and efficient operation, setting cost-reflective developer charges, non-residential charges and liquid trade waste fees and charges and then minimising its TRB in current dollars on a sustainable basis. As noted on pages 5 and 22, utilities which have implemented the *Best-Practice Management Framework (BPMF)* are encouraged to pay an 'efficiency dividend' to the Council's general revenue and should also include the dividend amount.

In practice this means reviewing whether your performance indicators under 'Social', 'Environmental' and 'Economic' are satisfactory. If they are not, you need to develop options to raise your levels of service and consult the community to establish the option which provides the best value for money.

After undertaking a review of indicators and trends in performance, each LWU should include any warranted corrective actions in its annual Action Plan to Council using the Action Plan template provided by DPI Water (see section 5.4 on page 20).

**The typical residential bill is the principal indicator of the overall cost** of a water supply or sewerage system (columns 4, 5 and 6 of Table 5 on page 116, Figure 1 on page 38, column 8 of Table 6 on page 126, Figure 10 on page 48, column 8 of Table 7 on page 146, Figure 42 on page 79) and is the annual bill paid by a residential customer using the utility's average annual residential water supplied (column 17 of Table 5 on page 116, Figure 26 on page 64). A critical element in minimising the typical residential bill and providing value for money for the community is to ensure each utility's operating cost (OMA – operation, maintenance and administration) (columns 31 and 32 of Table 5 on page 116, column 67 of Table 11 on page 180, Figures 33, 34, 35 on pages 70, 71, 72) is efficient.

LWUs should take note of section 5.2, which identifies the many factors that may contribute to apparent under-performance.

### 5.2 Factors impacting on performance

When comparing reported performance, utilities should take account of the wide range of factors which can impact on their performance and typical residential bill, which is the principal indicator of the overall cost of a water supply or sewerage system. Such factors can produce a fundamental difference in performance.

For example, in the case of water supply, a utility which provides full water treatment and has its own bulk storage dam and raw water transfer mains and channels will have a much higher capital and operating cost structure than a utility which has a nearby good quality groundwater supply. Each utility can improve its performance by taking account of such factors and comparing its performance with utilities having similar characteristics (refer to pages 18 and 19).

Other factors include the extent of the services provided by each utility, geography, climate etc. An understanding of these factors is vital for valid interpretation of performance data.

**The most meaningful performance indicators are the trends over time for each utility.** This involves identifying any trends in the indicators on page 2 of your TBL Performance Report (page 31) and comparing your results with the statewide and national median values and the top 20%. For the indicators on page 1 of your TBL Report, particular note should be taken of indicators that appear to be less than satisfactory, i.e. with a ranking of 4 or 5. However, even with such analysis, care needs to be exercised due to changes in the factors over time. For comparison between utilities, each utility should benchmark its performance with utilities having similar characteristics.

Some of the factors which can affect the performance of a water supply system are outlined on the following page.

### Utility characteristics

- (1) **Climate** – the variability of rainfall is a key driver of water supply costs in relation to water demand and drought security. This will affect both capital and operation and maintenance costs. For example, the average annual residential water supplied in inland NSW is 68% higher than coastal NSW.
- (2) **Geography** – Geology, geography and topography can significantly affect water transportation costs.
- (3) **Asset life cycle** – Recently constructed systems have much lower maintenance costs compared to older systems. In addition, as noted on page 14, renewal costs are typically nil until the asset is approaching the end of its useful life. They also have higher Typical Residential Bills and loan payments. Refer also to page 14.
- (4) **Development density** – Distribution networks are a major investment component of a water supply system. The density of urban development has a large effect on the infrastructure cost (e.g. the number of properties served per km of main has a Statewide median of 31, but has a range of 3 to over 70 (column 26 of Table 9 on page 169, Figure 6 on page 43)). A further key factor is the number of small discrete urban water supply systems operated by the utility which tend to greatly increase both the capital cost<sup>19</sup> and the operating cost per property.
- (5) **Water resources availability and proximity** – can incur significant capital and operating costs. Such costs would not apply for utilities relying on groundwater or those receiving a regulated supply from a State Water dam (note 12 on page 34).
- (6) **Size of LWU** – there are significant economies of scale for large utilities, particularly the capital cost of infrastructure and the operation and maintenance costs of water treatment works (page 21 and Figure 37 on page 74). Refer also to footnote 19 below.

### Social – levels of service

- (7) **Service standards** – Increasingly stringent standards for water quality and environmental health may result in additional capital and operation and maintenance costs to the utility. Similarly, requirements for minimum pressures or rates of flow can also affect costs.
- (8) **Filtered supply** – will incur both a high capital cost and a high treatment cost per property for small water supply systems (utilities without ‘unfiltered’ or ‘groundwater’ after their name in Tables 3, 5 and 6 have water treatment involving at least filtration and disinfection for over 50 per cent of their water supply) (note 13 on page 34).

### Environmental

- (9) **High average annual residential water supplied per property** (column 17 of Table 5 on page 116, column 56a of Table 10 on page 172, Figure 26 on page 63, Figure 33 on page 111) – such utilities should examine opportunities for reducing the water supplied through water conservation and implementation of best-practice water pricing. Achieving efficient water use is a key responsibility for a water utility. As shown on page 111, the regional NSW utilities have reduced the average annual residential water supplied per property by 50 per cent over the past 24 years. Many utilities with 3,000 to 10,000 connected properties are providing relatively weak pricing signals to their residential customers through their water usage charges. These utilities should review their tariff structure to provide appropriate pricing signals. Assistance is available from DPI Water in this regard (page 13). Refer also to section 4.4 on page 13 and section 5.3 on pages 19 and 20.

### Economic

- (10) **High loan payment per property** – indicates a relatively high capital cost per property, recent construction of significant capital works or use of short-term loans. **Twenty-year loan terms are strongly recommended** in order to minimise the required Typical Residential Bill (TRB), which avoids unfairly burdening existing customers and facilitates **inter-generational equity**. Refer also to page 14 of the *2014-15 NSW Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

<sup>19</sup> The lack of economy of scale and the lower development density in small towns result in a **capital cost per property** for providing water supply trunk mains to a town of 300 properties being typically over **3 times** that required for servicing a contiguous city of 15,000 properties. The capital cost per property for other structures such as water treatment works, service reservoirs, pumping stations and dams is similarly affected. This highlights the importance of Government financial assistance towards the capital cost of servicing backlog areas and why appropriate standards should be used, such as those in the *National Handbook on Affordable Water Supply and Sewerage for Small Communities*, ARMCANZ/WSAA, 1999.



- (11) **High pumping cost** (columns 94 to 99 of Table 13 on page 186, Figure 38 on page 74) – is influenced mainly by topography and geography. As noted on page 27, the LWU may be able to achieve significant savings in energy cost.

Similar considerations to those listed in this section apply to sewerage. In addition, a significant cost impactor is whether the LWU is operating nutrient removal facilities at its treatment works or providing filtration and disinfection of its treated sewage effluent.

### 5.3 Trends in Statewide performance indicators for Regional NSW

The trends in **statewide performance** indicators for regional NSW and comparisons with the national median for the 80 utilities reporting in the National Performance Report are shown in Table 4 on page 111. This data provides valuable contextual information to inform your LWU's future water supply and sewerage system planning and the annual review of your LWU's TBL Performance Reports (example Reports on pages 274 to 277). Strategic considerations arising from these results are discussed below.

Interstate performance comparisons for the 2014-15 financial year are provided on pages 17 to 20 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) and are not repeated here.

#### Peak day water supplied

**Figure 33c** and Figure 33 on page 111 show that over the past 15 years, the statewide median peak day water supplied per connected property has **declined by 61%** to 1,200 L/property/d, whilst the average annual residential water supplied has reduced by 25%. Although these results have been affected by drought water restrictions during the Millennium Drought of 2001 to 2010 and the very wet years in 2010-11 and 2011-12, they nevertheless point to large reductions in water use, which will enable **avoiding or deferring** the need to augment water treatment and water supply distribution system capacity.

The TBL Performance Report for each LWU shows graphs of the above 2 performance indicators (peak day water supplied (eg. Figure 33c on page 31) and average annual residential water supplied (eg. Figure 33 on page 31)), as well as the peak week water supplied for each of the last 10 years (Figure 33c on page 31). **Utility planning for the design peak day water treatment capacity should be informed by the volumes of your unrestricted peak day and peak week water supplied during hot weather (Figure 33c on page 31), rather than now irrelevant former design values such as 4,000 L/d per tenement.** Refer also to the 20-year planning data set which is now available to each LWU from DPI Water for use in preparing each LWU's IWCM Strategy or Strategic Business Plan (final paragraph of footnote 5 on page 3). Figure 33c on page 111 shows that the statewide median peak day water supplied over the last 6 years has ranged from 1,800 to 1,200 kL/d/connected property.

Further guidance is available in the second set of graphs in Figure 8 on page 45, which shows that for inland utilities such as Dubbo and Orange, the ratio of peak day water supplied to average water supplied is about 250%. For coastal utilities such as Gosford, MidCoast and Port Macquarie Hastings, the ratio is about 150%. Note also that the ratio is higher for coastal utilities with a very high influx of summer holiday population such as Shoalhaven, Eurobodalla and Tweed.

#### Pricing signals

The above also highlights the importance of providing **appropriate pricing signals** to your community including meeting the 75% required outcome for residential revenue from water usage charges (column 3 of Table 5 on page 116, **Figure 16** on page 111), and achieving full cost recovery (column 29 of Table 5). The 75% required outcome applies to LWUs with 4,000 or more connected properties, with a 50% outcome required for smaller LWUs. As noted on page 87 of the *NSW Strategic Business Planning Guidelines* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), your long term financial plan needs to take account of your projected capital expenditure over the next 30 years, which is typically well in advance of the need for the new capital investment.

In most cases such strong pricing signals (e.g. the median NSW water usage charge of 226 c/kL – **Figure 12** on page 111) will provide the necessary evidence to confirm significant reductions in the required design peak day demand, with a corresponding avoidance or deferral of the need to augment system capacity and reducing the required future capital expenditure and borrowings. Such avoidance or deferral of system augmentation will be of strategic benefit to your community through reduced future Typical Residential Bills (Figure 14 on page 111). Refer also to the preceding 4 paragraphs and to page 5 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

## 5.4 Action plan

Each LWU is required to prepare and implement a sound annual Action Plan to Council, based on its review of the LWU's TBL Performance Report for its water supply business and for its sewerage business. The Action Plan should address any emerging issues or areas of under-performance and should also document any target dates for remedial actions. It should also report results for the financial year for the key actions set out in the utility's Strategic Business Plan.

The **steps** each LWU should follow **in reviewing its performance and preparing its Action Plan** to Council are shown in the box on page 26 of the *2014-15 NSW Performance Monitoring Report*. In addition to reviewing its TBL Performance Reports to identify any warranted remedial actions, the LWU needs to annually 'roll forward', review and update its 30-year total asset management plan for projects completed, modified or deferred and input the results, together with its latest annual financial statements to prepare and update its 30-year financial plan. The LWU's Action Plan also needs to include actions from the review of its DWMS (page 10), any Section 61 Reports from DPI Water, as well as actions for addressing any 'emerging issues', such as 'liveability', water security and climate variability in its IWCM strategy.

A key role for the Action Plan is to '**close the planning loop**' with the later of the utility's 30-year strategic business plan and 30-year IWCM Strategy and 30-year financial plan. The utility's TRB must therefore be compared with the above projection and any necessary corrective action included in the Action Plan (note 3 on page 29).

In order to assist LWUs, DPI Water will continue to provide a template for each LWU's Action Plan (example on pages 28 and 29) together with the annual TBL reports for each LWU. The template shows your LWU's results, comments and drivers for each indicator and your LWU's ranking relative to similar sized LWUs followed by the ranking relative to all LWUs. Space is provided for you to document your proposed actions (the right hand column on pages 28 and 29).

In order to prepare and implement a sound annual Action Plan to Council, it will be necessary for each LWU to review its performance. In practice this means reviewing whether the performance indicators under 'Health', 'Levels of Service', 'Environmental' and 'Economic' are satisfactory, taking into account factors that may affect performance outlined below. If the indicators are unsatisfactory, the LWU will need to develop suitable options to improve performance.

Guidance for councillors on quickly understanding and using your TBL Performance Report and Action Plan is provided in Appendix G of the *NSW Water and Sewerage Strategic Business Planning Guidelines, July 2011* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). This appendix will also assist the water and sewerage manager in preparing a sound Action Plan to Council which addresses the Council's obligations to provide appropriate, affordable, cost-effective and sustainable water supply and sewerage services. An updated copy of this appendix is emailed annually by DPI Water to each LWU with the LWU's TBL Reports and Action Plan templates.

**Table 2 - Median economic efficiency indicators for four sizes of LWUs - Water Supply 2014-15**

| Size of LWU  | Over 10,000<br>connected<br>properties | 3,001 to 10,000<br>connected<br>properties | 1,501 to 3,000<br>connected<br>properties | 200 to 1,500<br>connected<br>properties | Statewide<br>median<br>(page 105) |
|--|--|--|---|---|-----------------------------------|
| Performance indicator                              | (27 LWUs)                              | (28 LWUs)                                  | (19 LWUs)                                 | (22 LWUs)                               | (96 LWUs)                         |
| Operating cost/property (\$)                       | 388                                    | 524  | 555                                       | 634                                     | 400                               |
| Operating cost (c/kL)                              | 130                                    | 115  | 111                                       | 86                                      | 129                               |
| Operating cost/100 km (\$'000)                     | 1,320                                  | 1,240                                      | 1,230                                     | 1,110                                   | 1,320                             |
| Management cost/property (\$)                      | 134                                    | 160  | 139                                       | 135                                     | 141                               |
| Treatment cost <sup>1</sup> /property (\$)         | 45                                     | 123  | 158                                       | 162                                     | 58                                |
| Pumping cost/property (\$)                         | 26                                     | 54   | 95  | 81                                      | 31                                |
| Energy cost <sup>2</sup> /property (\$)            | 17                                     | 38   | 41  | 47                                      | 18                                |
| Water Main cost/property (\$)                      | 74                                     | 82   | 79  | 84                                      | 74                                |
| No. of employees/1,000 properties                  | 1.2                                    | 1.6  | 1.7                                       | 2.1                                     | 1.4                               |
| Economic Real Rate of Return                       | 1.6                                    | 1.0  | 2.8                                       | 0.3                                     | 1.6                               |
| Capital expenditure <sup>3</sup> (\$ per property) | 162                                    | 167  | 258                                       | 87                                      | 155                               |
| Properties served/km of main                       | 40                                     | 28   | 25  | 23                                      | 31                                |

**Notes:**

1. Only LWUs with a water treatment works with at least filtration and disinfection for over 50 per cent of supply have been considered.
2. A component of pumping cost.
3. As a LWU's capital expenditure in any particular year will depend on its overall capital works programming, it is not possible to draw conclusions by comparing your LWU's 2014-15 capital expenditure with the medians in these tables.

**Table 3 - Median economic efficiency indicators for four sizes of LWUs - Sewerage 2014-15**

| Size of LWU  | Over 10,000<br>connected<br>properties | 3,001 to 10,000<br>connected<br>properties | 1,501 to 3,000<br>connected<br>properties | 200 to 1,500<br>connected<br>properties | Statewide<br>median<br>(page 106) |
|--|--|--|---|---|-----------------------------------|
| Performance indicator                              | (24 LWUs)                              | (24 LWUs)                                  | (24 LWUs)                                 | (27 LWUs)                               | (99 LWUs)                         |
| Operating cost/property (\$)                       | 425                                    | 420  | 359                                       | 363                                     | 420                               |
| Operating cost (c/kL)                              | 172                                    | 216  | 205                                       | 187                                     | 193                               |
| Operating cost/100 km (\$'000)                     | 1,720                                  | 1,370                                      | 1,180                                     | 820                                     | 1,720                             |
| Management cost/property (\$)                      | 169                                    | 142  | 122                                       | 98                                      | 160                               |
| Treatment cost/property (\$)                       | 145                                    | 134  | 141                                       | 137                                     | 145                               |
| Pumping cost/property (\$)                         | 72                                     | 43   | 46  | 56                                      | 72                                |
| Energy cost <sup>1</sup> /property (\$)            | 37                                     | 36   | 29  | 25                                      | 37                                |
| Sewer main cost/property (\$)                      | 42                                     | 63   | 32  | 37                                      | 51                                |
| No. of employees/1,000 properties                  | 1.6                                    | 1.7  | 1.5                                       | 2.3                                     | 1.6                               |
| Economic Real Rate of Return                       | 1.7                                    | 2.0  | 1.2                                       | 0.3                                     | 1.7                               |
| Capital expenditure <sup>2</sup> (\$ per property) | 215                                    | 180  | 96  | 69                                      | 204                               |
| Properties served/km of main                       | 43                                     | 36   | 34  | 30                                      | 38                                |

**Notes:**

1. A component of pumping and treatment costs.
2. As a LWU's capital expenditure in any particular year will depend on its overall capital works programming, it is not possible to draw conclusions by comparing your LWU's 2014-15 capital expenditure with the medians in these tables.

### Achieving full cost recovery for water supply

Some NSW utilities have been using a long-term financial model where they input water supply access and usage charges and projected volumes of water supplied to determine the required future revenue. A number of these utilities have experienced significant revenue shortfalls in recent years as a result of reduced water sales due to more efficient water use by residents, above average rainfall and/or drought water restrictions.

Accordingly, it is recommended that utilities do not use models involving access and usage charges in order to avoid such revenue shortfalls as well as potentially misleading customers on the required future access and usage charges. Rather, utilities should use a model such as the NSW Financial Planning Model (FINMOD) – refer to pages 84 and 85 of the *2010-11 NSW Performance Monitoring Report* which determines the required future typical residential bill and annual revenue in current dollars.

Your utility can then set each year's water supply tariff in accordance with Circular LWU 11 of March 2011 using an evidence based estimate of the residential water to be supplied in the next financial year, together with the access and usage charges required to yield the Typical Residential Bill and annual revenue in accordance with your 30-year financial plan.

Such an approach is transparent as the financial modelling discloses the required Typical Residential Bill (and annual revenue) in current dollars as required by Items 1 and 16 of the Strategic Business Planning Check List, July 2014 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

In addition, annually setting your water supply tariff in accordance with Circular LWU 11 will minimise the risk of revenue shortfalls while maintaining Typical Residential Bills in accordance with your LWU's financial plan. Assistance is available from DPI Water ([urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au) or (02) 9842 8508).

Each LWU which meets all the outcomes required by the *NSW Best-Practice Management Framework* (page 6), including a current 30-year IWCM Strategy and financial plan, is encouraged to pay a dividend from the surplus of its water and sewerage businesses to the council's general revenue. A LWU which pays such an 'efficiency dividend' will be moving towards **upper bound pricing**, which is required under the National Water Initiative, where practicable.

Refer also to:

- section 4.4 on page 13, which notes that the NSW Government and the Productivity Commission encourage all LWUs to use a 2-part tariff with a uniform water usage charge per kL for all water use and highlights the strategic benefits of the strong NSW pricing signals; and
- note 3 on page 29, which indicates that comparing your Typical Residential Bill (TRB) with the projection in the later of your IWCM Strategy and Financial Plan and your Strategic Business Plan is mandatory in preparing your annual Action Plan to Council. If you are not achieving full cost recovery, you will need to review & increase your access and/or usage charges in order to do so.

### Implementation of best-practice management framework

Implementation of each of the key outcomes (Table 3 on page 108) required by the BPM Framework is shown on the TBL Report (page 30) and the overall level of implementation is shown in column 33 of Table 5 on page 116. LWUs should address any areas not yet implemented, which are shown on the Action Plan template (page 28). For each instance of non-implementation, the Action Plan should briefly outline the strategy and target date for achieving implementation. LWUs that achieve the outcomes required by the Framework will have appropriate, affordable, cost-effective and sustainable piped water supply and sewerage services and will comply with the National Water Initiative. As noted on page 5 implementation of the 19 outcomes required by the Framework is also a prerequisite for payment of a dividend from the surplus of the LWU's water supply or sewerage business and for financial assistance towards the capital cost of backlog infrastructure (as at 1996) under the *NSW Government's Country Towns Water Supply and Sewerage Program* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) or the Regional Water and Waste Water Backlog Program ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Refer also to footnote 6 on page 7.



### Performance based on triple bottom line

LWUs should review the Performance indicators shown in the TBL Report (example on page 30) and investigate those indicators where performance is below the median. In particular, for those indicators with a ranking of 4 or 5, LWUs should investigate the reasons for the ranking and if appropriate, develop a strategy for improvement. It should be noted that a low ranking does not necessarily imply poor performance as there are a number of factors that can impact performance as shown in section 5.2 on page 17.

Eg., the rankings take no account of the impact of utility characteristics (e.g. whether the water supply is fully filtered or whether it is a nearby good quality groundwater, whether the LWU provides a bulk storage dam & raw water transfer mains and channels etc.). The Action Plan should take account of these characteristics.

As noted above, the rankings are based on statewide medians. While all LWUs should strive to raise their performance to at least the statewide 80th percentile (Tables 1, 2 and 2A on pages 105, 106 and 107), it is also useful to compare your LWU's performance with LWUs of a similar size. To assist LWUs in such comparisons, the medians for the relevant indicators have been shown in Tables 5 to 18 for each LWU size grouping. In addition, LWUs may benchmark their performance against LWUs with similar characteristics (section 3.3 on page 4).

Further factors that may assist LWUs in their assessment of performance are listed below.

### Utility characteristics

- **Renewals** – LWUs should ensure that their TRB in current dollars (i.e. adjusted for inflation) is consistent with the projection in its 30-year financial plan in order to ensure it is raising sufficient revenue for the required infrastructure. LWUs should also examine their asset management plan and ensure that the necessary funds are directed to maintenance and renewals. Refer to section 4.5 on page 14.
- **Employees** – the number of employees per 1,000 properties is a good indicator of operating and management costs (column 32 of Table 9 on page 169, Figure 10 on page 48, column 14 of Table 14 on page 189, Figure 41 on page 78). If the number of employees per 1,000 properties is significantly higher than the median shown in the tables on page 21 for the size of LWU, you should examine the management structure and identify the reasons for the difference and provide a brief explanation or your proposed remedial action in the Action Plan. However, it is important to note that a higher number of employees per 1,000 properties is needed for **small non-contiguous water supply systems** and for **small water or sewage treatment works** (refer to the first dot point on page 27 and to page 21).
- **Employee awareness and training** is of strategic importance in the safe and effective delivery of water supply and sewerage services, eg. refer to Element 7 of the *NSW guidelines for drinking water management systems*, NSW Health and NSW Office of Water, 2013 ([www.health.nsw.gov.au/environment/water](http://www.health.nsw.gov.au/environment/water)). In particular, LWUs need to ensure that water treatment operators, wastewater treatment operators, dam safety officers, trade waste officers and engineers update their training and skills at least every 3 years. Refer to the boxes on pages 9 and 36. LWUs should provide an average of at least 2 days/a of appropriate training for each employee. Refer to Tables 9 and 14 on pages 169 and 189 for the training currently provided by each LWU.
- **Properties served per km** – the density of urban development has a large effect on the infrastructure cost. For LWUs with >10,000 properties the median is 35 properties per km (range 6 to 73), while for LWUs with 200 to 1,500 properties the median is 22 (range 3 to 34) (column 26 of Table 9 on page 169, Figure 6 on page 43, column 9 of Table 14 on page 189, Figure 40 on page 77).

### Social factors

- **Typical residential bill (TRB)** – as noted on page 17, this is the principal indicator of the overall cost of a water supply or sewerage system (it is the annual bill paid by a residential customer using the utility's average annual residential water supplied). A critical element of the TRB is the operating cost (OMA – operation, maintenance and administration) (columns 31 and 32 of Table 5 on page 116, column 67 of Table 11 on page 180, Figures 33, 34, 35 on pages 70, 71, 72) as noted on page 27 under Economic Factors – Efficiency. As noted on page 20, your LWU's Action Plan must report on whether the TRB is consistent with the projection in the later of your LWU's 30-year strategic business plan and 30-year IWCM Strategy and financial plan and on any warranted corrective action. A TRB

which meets these required outcomes will also ensure you are achieving **full cost recovery** (ERRR on page 26).

- **Residential revenue from usage charges (per cent)** – The *Best-Practice Management Framework* (page 6) requires LWUs with 4,000 or more properties to have at least 75 per cent of residential revenue generated through usage charges, while LWUs with fewer properties, including LWUs with a dual supply must have at least 50 per cent of residential revenue generated through usage charges. This is a key demand management measure to ensure customers receive a sufficiently **high pricing signal** to encourage careful water use (column 3 of Table 5 on page 116, column 13 of Table 6 on page 134, Figure 13 on page 51). As noted in Section 4.4 on page 13, the statewide median residential revenue from water usage charges was 72 per cent. Refer also to item 9 on page 18 and the residential water usage charge below.
- **Residential water usage charge (c/kL)** – Higher usage charges have been ranked ‘1’ because they provide a strong pricing signal, while lower charges have been ranked ‘5’. However, this indicator should be viewed in conjunction with the TRB and whether the LWU is achieving full cost recovery, in which case a lower water usage charge may be a good result. The **strategic benefits of the strong NSW pricing signals** and the resulting efficient water use are highlighted on page 5 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*. Refer also to Figure 12 on page 50, Figure 12 on page 111 and column 5b of Table 6 on page 134.

## Health

- **Microbiological water quality compliance** – This is the most important public health indicator, achievement of microbiological compliance is a high priority for each LWU and must be reported in the annual Action Plan to Council. As shown in Figure 17 on page 55, all the LWUs complied with the microbiological water quality requirements in 2014-15 (also refer to columns 9 and 10 of Table 5 on page 116). LWUs with less than 98 per cent of samples containing no *E. coli* do not comply with the *Australian Drinking Water Guidelines, 2011*. Microbiological non-compliance, boil water alerts, the remedial action implemented and whether it was successful must be reported in your LWU's annual Action Plan to Council (refer to pages 8 to 12, note 4 on page 29 and Appendix E on page 305). Assistance is available from your DPI Water Regional Water and Sewerage Treatment Officer (refer to page 36 for the contact details of each officer).

As indicated in section 4.3 on pages 9 and 10, each LWU has prepared a risk-based drinking water management system (DWMS) and now needs to review the effectiveness of its DWMS and the LWU's implementation of the DWMS, at least annually, to ensure that it maintains currency with the drinking water supply. A record of this review should be kept and any required corrective action documented. Assistance is available from DPI Water ([urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au) or (02) 9842 8508).

- **Public health incidents** – Where this indicator is significantly higher than the statewide median, your LWU's Action Plan should provide a brief explanation and the proposed remedial action if appropriate.
- **Capital investment on improving public health** – If a LWU reported zero for this indicator, investigate to ensure that this indicator is not under reported.
- **Sewerage coverage** – Figure 46 on page 83 – percentage of the urban population (residential zoned land) with a reticulated sewerage service. Refer also to Indicator 16 on page 276.

## Customer service

- **Water quality complaints** – LWUs with a high number of complaints (in the bottom 20 per cent of LWUs) should investigate the reasons for the complaints, including past performance & trends indicated in page two of the TBL Report. Provide a brief explanation together with proposed remedial action in your LWU's Action Plan. Note that the result for this indicator will be influenced by the type of business (e.g. Unfiltered supply, groundwater etc) (column 13 of Table 5 on page 116, Figure 19 on page 57).
- **Odour complaints** – This is a critical indicator for providing appropriate sewerage levels of service. LWUs with a high number of complaints (in the bottom 20 per cent of LWUs) should investigate the reasons for the complaints; including past performance and trends indicated in page two of the TBL Report. Provide a brief explanation together with proposed remedial action in your LWU's Action Plan (column 61 of Table 17 on page 198, Figure 49 on page 86).
- **Number of main breaks** – LWUs should annually monitor their breaks/100km of main, paying close attention to any sections of main with a high incidence of breaks (say treble the statewide median of

9 breaks per 100 km). LWUs with a high incidence of breaks should investigate the likely reasons for the breaks, including the past performance and trends indicated in page two of the TBL Report. Provide a brief explanation together with proposed remedial action in your LWU's Action Plan (column 15 of Table 5 on page 116, Figure 21 on page 59). Refer also to section 4.5 on page 14.

- **Average duration of unplanned interruptions (water)** – where this indicator is significantly higher than the statewide median, your LWU's Action Plan should provide a brief explanation together with proposed remedial action if appropriate (column 14 of Table 5 on page 116).
- **Average interruption (sewerage)** – where this indicator is significantly higher than the statewide median of 95 minutes, your LWU's Action Plan should provide a brief explanation together with proposed remedial action if appropriate (column 65 of Table 17 on page 198).

### Environmental factors

- **Average annual residential water supplied** – This indicator is heavily influenced by the location and type of LWU (e.g. an inland LWU would expect to have high residential water supplied while a LWU with a dual supply would expect to have a very high value) and any applied water restrictions. Inland LWUs have significantly higher residential water supplied due to their hotter and drier climate and the use of evaporative coolers. Note that the median residential water supplied for inland LWUs in 2014-15 was 225 kL/property compared to 150 kL/property for coastal LWUs (column 17 of Table 5 on page 116, column 14 of Table 6 on page 134, Figure 26 on page 64). Refer also to Item 9 on page 18.
- **Total urban water supplied** – Figure 9 on page 47 and column 2 of Table 5 on page 116.
- **Real Losses** – LWUs should monitor their Real Losses (column 18 of Table 5 on page 116, column 41 of Table 10 on page 172, Figure 28 on page 66) in L/d/connection. These should be minimised if the LWU is facing drought water restrictions or the need for augmenting the capacity of its water supply headworks system or its water treatment works. Such timely reduction of Real Losses will provide major economic benefits through deferral of the need for capital investment for upgrading of infrastructure. As noted on page 16, for almost all LWUs, monitoring your leakage in "L/d per connection" is the relevant measure for tracking your LWU's leakage performance. As also noted on page 16, **non-revenue water (NRW)** should also be monitored in L/d/connection (column 41f of Table 10 on page 172, Figure 29 on page 67).
- **Water Losses (ILI)** – The real losses above are the principal indicators of leakage performance. The ILI may provide some additional information and is recommended for international comparisons (page 15; refer also to footnote 18 on page 16). ILI values of less than about 1.5 indicate excellent management of real losses, while an ILI close to 1.0 means that the real losses are close to the unavoidable or technical minimum losses. An ILI of less than 1.0 is meaningless and may indicate errors in the input data. An ILI greater than three may indicate old or poor infrastructure or a relatively relaxed active leakage control policy (column 41b of Table 10 on page 172).
- **Recycled water** – The volume of recycled water use includes effluent reuse for town water and agricultural uses. The volume reported for town water should equal the recycled volume shown in the water supply report. In 2014-15 20 per cent of LWUs reused over 50 per cent of their effluent (columns 13 to 14b of Table 8 on page 155 and Figure 57 on page 94). As shown in columns 21 and 22 of Table 5 on page 116, the highest volume recycled by a utility was 5,600 ML and a further five utilities each recycled over 2,000 ML. Refer also to figure 33d on page 111, figures 27 and 26a on page 114 and figure 27 on page 277.
- **Compliance with BOD in licence** – where compliance is low (e.g. below 90 per cent), provide a brief explanation together with proposed remedial action in the Action Plan (column 55 of Table 17 on page 198, Figure 50 on page 87).
- **Compliance with SS in licence** – where compliance is low (e.g. in the bottom 20 per cent of LWUs), provide a brief explanation together with proposed remedial action in the Action Plan if appropriate (column 57 of Table 17 on page 198, Figure 51 on page 88).
- **Percent of sewage treated that was compliant** – Figure 54 on page 91 and column 19 of Table 5 on page 116. Refer also to figure 18 on page 113 and figure 18 on page 277.
- **Sewer main breaks and chokes** – sections of sewer main with a high incidence of breaks and chokes (say treble the statewide median of 35 per 1,000 connected properties) warrant close attention. Provide a brief explanation together with proposed remedial action in the Action Plan

(column 20 of Table 5 on page 116, column 59 of Table 17 on page 198, Figure 55 on page 92). Refer also to figure 36 on page 113 and figure 36 on page 277

- **Sewer overflows to the environment** – where this indicator is significantly higher than the statewide median, provide a brief explanation together with proposed remedial action in the Action Plan (column 60 of Table 17 on page 198, Figure 56 on page 93).
- **Environmental incidents** – where this indicator is significantly higher than the statewide median, provide a brief explanation together with proposed remedial action in the Action Plan.

## Economic factors

### Financial

- **Economic real rate of return (ERRR)** – this reflects the rate of return generated from operating activities (i.e. excluding interest income, grants for acquisition of assets and gain/loss on disposal of assets). Water and sewerage charges should be sufficiently high to ensure continuing financial viability and provide for asset renewals and a positive rate of return, but not so high that they generate excessive monopoly profits. The ERRR is a good indicator of the financial health of a business (columns 27 and 28 of Table 5 on page 116, column 12 of Table 6 on page 134, Figure 32 on page 69, column 11 of Table 7 on page 146, Figure 61 on page 97). LWUs should achieve **full cost recovery** by setting each year's tariff to raise the required revenue on the basis of its careful estimate of the water to be supplied in the next financial year as indicated in the box on page 22, which will result in a satisfactory Typical Residential Bill (TRB – page 23). This is particularly important during drought periods. Refer also to Figures 27 and 28 on pages 59 and 60 of the *2014-15 NSW Performance Monitoring Report* and Appendix G on page 84 of the *2010-11 NSW Performance Monitoring Report*.
- **Return on assets** – this ratio is similar to the ERRR. It indicates the earnings generated before interest and tax (EBIT) for the assets controlled by the business. It is calculated as the operating profit before dividends divided by the difference between total assets and total liabilities. All LWUs should aim to achieve a positive value for ERRR or for return on assets (column 11 of Table 6 on page 134, column 9 of Table 7 on page 146, column 24c of Table 5A on page 120). Refer also to note 3 on page 29.
- **Net Debt to equity**<sup>20</sup> – net debt is the sum of long and short term borrowings less cash and investments. Equity is the total assets less total liabilities. In 2014-15 the NSW median net debt to equity for water supply and sewerage was -1% (column 19a of Table 5 on page 116). LWUs facing significant capital investment are encouraged to make greater use of borrowings to reduce their required TRB. **Twenty year loan terms are strongly recommended** in order to avoid an unfair financial burden on existing customers and to facilitate **inter-generational equity**. Refer also to Item 10 on page 19.
- **Loan payment (\$/property)** – this indicator shows the component of the TRB applied to meet debt payments. A high loan payment per property indicates a relatively high capital cost per property, recent construction of significant capital works or use of short-term loans (column 66a of Table 11 on page 180 and column 51a of Table 16 on page 195). The median loan payment in 2014-15 for water supply was \$69 per connected property (Table 1 on page 105).
- **Interest cover** – this ratio is an indicator of the LWU's ability to meet interest commitments. It is calculated as the earnings before interest and tax (EBIT) divided by net interest (interest expense less interest income). The interest cover is nil for a loss making business (column 27 of Table 5A on page 120). As a general guide, an interest cover >2 is a good interest cover position. For 2014-15, the median interest cover for water supply and sewerage was 4 (Table 2A on page 107).

<sup>20</sup> It is important to note that most NSW LWUs have relatively little borrowings at present. In **2014-15** the statewide median net debt to equity for LWU water and sewerage was -1% (range -37% to 22%). The **2014-15** net debt to equity for major Australian utilities include 98% for Sydney Water, 134% for ICON Water, 168% for Melbourne Water, 56% for Yarra Valley Water, 63% for Queensland Urban Utilities, 53% for Water Corporation (WA), 120% for SA Water and 81% for Hunter Water (National Performance Report 2014-15 for Urban Water Utilities). Refer also to graph 27 on page 211. Providing your utility has a soundly based asset management plan and financial plan (including sensitivity analysis), net debt to equity of up to 50% when financing a major capital works program for growth and/or improved levels of service, would be satisfactory for NSW LWUs.



## Efficiency

The operating cost (OMA – operation, maintenance and administration) per property is a prime indicator of the performance of an LWU and should be reviewed carefully by each LWU to ensure it has an efficient operating cost (columns 31 and 32 of Table 5 on page 116, column 67 of Table 11 on page 180, Figure 33 on page 70). The components of operating cost (shown on pages 21, 31, 112, 114, 275 and 277) are:

- **Management cost** – this includes administration, engineering and supervision and is typically almost 40 per cent of the total operating cost (column 68a of Table 11 on page 180, Figure 36 on page 73). The number of employees per 1,000 properties can be a good indicator of the operating and management costs and hence the efficiency of an LWU. However, LWUs with a number of non-contiguous (i.e. separate) water supply systems and those with small water treatment works or small sewage treatment works will need a higher level of employees/1000 properties in order to effectively manage their systems (refer also to ‘employees’ on page 23 and page 21). Similarly, LWUs with a low development density, under about 20 properties served / km of water main (column 26 of Table 9 on page 169) will need a higher level of employees.
- **Treatment cost (water)** – (columns 104 to 107 of Table 13 on page 186, Figure 37 on page 74) this is dependent on the type and quality of the water source and the extent of treatment provided. In addition, as shown in the Table on page 21, there are great economies of scale for the operation of water treatment works (i.e. facilities involving at least filtration and disinfection).
- **Treatment cost (sewage)** – (columns 89 to 92 of Table 18 on page 201, Figure 66 on page 102) this is dependent on the type of treatment and the discharge requirements. Where the discharge licence conditions are stringent, involving for example a low level of phosphorus, treatment costs will be high.
- **Pumping cost (water)** – (columns 94 to 98 of Table 13 on page 186, Figure 38 on page 75) this is dependent on topography and, for water supply, the location of the water source. For example, Essential Energy has a high pumping cost due to the distance required to pump from the water source, while Fish River is almost a fully gravitational supply, with negligible pumping costs. For water supply, there are significant economies of scale in pumping cost per property.
- **Energy cost** – (column 98 of Table 13 on page 186) this is mainly a consequence of pumping requirements and is a component of pumping cost for water supply. Energy cost may be reduced by maximising pumping in off peak periods or by obtaining a competitive energy rate from the energy supplier (e.g. maximising off peak pumping has provided annual savings in energy costs of over \$200,000 for a number of large water supplies). For sewerage, energy cost is a component of pumping and treatment costs (column 83 of Table 18 on page 201). Significant cost savings may be available by optimising energy use in the treatment process (e.g. such optimising of energy use has provided annual savings of over \$100,000 for a number of large sewage treatment works).
- **Water and Sewerage mains cost** – (column 84 of Table 13 on page 186, Figure 39 on page 76, column 70 of Table 18 on page 201, Figure 68 on page 104) this is dependent on the age and condition of the mains, the ground conditions and the number of connected properties per km of main.

## 5.5 Example TBL report and action plan – Coffs Harbour City Council

### Coffs Harbour City Council Water Supply – Action Plan Page 1

#### Summary

In 2014-15, Coffs Harbour City Council has implemented all 19 planning, pricing and management outcomes (10 water, 9 sewerage) required by the *NSW Best-Practice Management (BPM) Framework* and its performance has continued to be very good.

The key actions required are shown below for Indicators 20 and 32. Note also Indicators 12 and 14 and that a new IWCM Strategy and financial plan are required in 2016.

Key action from Council's Strategic Business Plan:

- Strategic business plan and financial plan completed in May 2012

(<http://www.coffsharbour.nsw.gov.au/places-for-living/Documents/Strategic-Business-Plans-Water-Supply-Sewerage.pdf>).

| INDICATOR               |   | RESULT <sup>2</sup>                                     |                    | COMMENT/DRIVERS   | ACTION  |
|-------------------------|---|---|--------------------|---|---|
|                         | <b>Best-Practice Management (BPM) Framework</b> | Implemented all the Best-Practice Outcomes <sup>1</sup> | Very good          | Implementation of the required BPM outcomes demonstrates effectiveness and sustainability of water supply business. 100% implementation is required for eligibility to pay an 'efficiency dividend'.                        | Prepare a new 30-year IWCM Strategy, Financial Plan and Report in accordance with the July 2014 IWCM Check List ( <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> ) as the existing IWCM Strategy is over 6 years old. |
| <b>CHARACTERISTICS</b>  |   |   |                    |   |   |
| 5                       | Connected property density                      | 40 per km of main<br>High ranking (2, 1)                |                    | A connected property density below 30 can significantly increase the cost per property of providing services, as will also a high number of small discrete water supply schemes.  |   |
| 9                       | Renewals expenditure                            | 0%<br>Lowest ranking (5, 5)                             | May require review | Adequate funds must be programmed for works outlined in the Asset Management Plan – page 3 of the 2014-15 NSW Performance Monitoring Report.  | Satisfactory. Appropriate renewals included in capital works program reported in Council's Strategic Business Plan 2012.  |
| 10                      | Employees                                       | 1.9 per 1,000 props<br>Low ranking (4, 3)               | May require review |   | Satisfactory in view of Council's storage dams and water treatment works.   |
| <b>SOCIAL - CHARGES</b> |   |   |                    |   |   |
| 12                      | Residential water usage charge                  | 267 c/kL<br>High ranking (2, 1)                         | Good               | Benefits of strong pricing signals are shown on page 5 of the 2014-15 NSW Performance Monitoring Report.  | Good. Consider replacing the existing inclining block tariff with a two-part tariff [refer to Circular LWU11] with a uniform usage charge for all water use, as recommended by the NSW Government and the Productivity Commission.    |
| 13                      | Residential access charges                      | \$143 per assessment<br>Highest ranking (1, 1)          | Good               |   | See 12.   |
| 14                      | Typical residential bill <sup>2</sup> (TRB)     | \$588 per assessment<br>Median ranking (3, 2)           | Good               | TRB should be consistent with projection in the financial plan. Drivers – OMA Management Cost and Capital Expenditure.  | The TRB of \$588 is satisfactory as it is greater than the projected TRB of \$585 (2015/16\$) in Council's SBP. The 2016-17 tariff will be determined in accordance with Circular LWU11 of March 2011.                                |
| 15                      | Typical developer charges                       | \$10100 per ET<br>Highest ranking (1, 1)                | Good               |   |   |
| 16                      | Residential revenue from usage charges          | 76% of residential<br>Highest ranking (1, 1)            | Very good          | ≥ 75% of residential revenue should be generated through usage charges.   | See 12.   |
| <b>SOCIAL – HEALTH</b>  |   |   |                    |   |   |
| 19                      | Physical quality compliance                     | Yes<br>Highest ranking (1, 1)                           | Very good          |   |   |
| 19a                     | Chemical quality compliance                     | Yes<br>Highest ranking (1, 1)                           | Very good          |   |   |
| 20                      | Microbiological compliance <sup>4</sup>         | Yes<br>Highest ranking (1, 1)                           | Very good          | Critical indicator. LWUs should annually review their risk based Drinking Water Management System (DWMS) in accordance with NSW Guidelines for drinking water management systems, NSW Health and NSW Office of Water, 2013. | Also address the requirements of Circular LWU 18 of June 2014 and any Section 61 Reports from DPI Water. Include the corrective actions identified in your Action Plan.   |

1. Council needs to annually 'roll forward', review and update its 30-year total asset management plan (TAMP) and 30-year financial plan, review Council's TBL Performance Report and prepare an **Action Plan** to Council. The Action Plan is to include any actions identified in Council's annual review of its DWMS (Indicator 20) and any Section 61 Reports from DPI Water. Refer to pages 25, 26, 103 and 108 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report.

2. The ranking relative to similar size LWUs is shown first (Col. 2 of TBL Report) followed by the ranking relative to all LWUs (Col. 3 of TBL Report).



## Coffs Harbour City Council Water Supply – Action Plan Page 2

| INDICATOR                  |   | RESULT  |                    | COMMENT/DRIVERS  | ACTION  |
|----------------------------|---|---|--------------------|--|---|
| SOCIAL – LEVELS OF SERVICE |   |   |                    |  |   |
| 25                         | Water quality complaints                  | 0 per 1,000 props<br>Highest ranking (1, 1)   | Very good          | Critical indicator of customer service. Can be influenced by the type of business - e.g. unfiltered supply.  |   |
| 26                         | Service complaints                        | 0.1 per 1,000 props<br>Highest ranking (1, 1) | Very good          | Key indicator of customer service.   | Council's reporting system has been revised to record complaints only, [ie. expressions of dissatisfaction], in accordance with the definition of this indicator. |
| 27                         | Incidence of unplanned interruptions      | 11 per 1,000 props<br>High ranking (2, 2)     | Good               | Key indicator of customer service, condition of network and effectiveness of operation.  |   |
| 30                         | Number of main breaks                     | 3 per 100km of main<br>Highest ranking (1, 1) | Very good          | Drivers – condition and age of water mains, ground conditions.   | Good, as result is well below the Statewide Median of 9 breaks per 100 km of main.  |
| 32                         | Total Days Lost                           | 3.2%<br>Median ranking (3, 4)                 | Satisfactory       |  | Will be reviewed.   |
| ENVIRONMENTAL              |   |   |                    |  |   |
| 33                         | Average annual residential water supplied | 167 kL per prop<br>Median ranking (3, 2)      |                    | Drivers – available water supply, climate, location (Inland or coastal), pricing signals (Indicator 12), restrictions.   |   |
| 34                         | Real losses (leakage)                     | 50 L/c/d<br>High ranking (2, 2)               | Good               | Loss reduction is important where an LWU is facing drought water restrictions or the need to augment its water supply system.  |   |
| ECONOMIC                   |   |   |                    |  |   |
| 43                         | Economic Real Rate of Return (ERRR)       | 2%<br>Highest ranking (1, 2)                  | Good               | Reflects the rate of return generated from operating activities (excluding interest income and grants). An ERRR or ROA of ≥ 0% is required for full cost recovery.                         | Satisfactory. See 14.   |
| 44                         | Return on assets (ROA)                    | 0.6%<br>Low ranking (4, 4)                    |                    | See 43.  |   |
| 45                         | Net debt to equity – water and sewerage   | 13%<br>Highest ranking (1, 1)                 | Very good          | LWUs facing significant capital investment are encouraged to make greater use of borrowings – page 13 of the 2014-15 NSW Performance Monitoring Report.                                    |   |
| 46                         | Interest cover                            | 1<br>Median ranking (3, 3)                    | Satisfactory       | Drivers – in general, an interest cover > 2 is satisfactory.   |   |
| 47                         | Loan payment                              | \$454 per prop<br>Highest ranking (1, 1)      | Very good          | The component of TRB required to meet debt payments. Drivers – expenditure on capital works, short term loans.   |   |
| 49                         | Operating cost (OMA)                      | \$395 per prop<br>High ranking (2, 1)         | Good               | Prime indicator of the financial performance of an LWU. Drivers – development density, level of treatment, management cost, topography, number of discrete schemes and economies of scale. | The components below have been carefully reviewed as part of developing Council's strategic business plan.  |
| 51                         | Management cost                           | \$153 per prop<br>Low ranking (4, 3)          | May require review | Typically about 40% of the OMA. Drivers – No. of employees. No. of small discrete water schemes.   |   |
| 52                         | Treatment cost                            | \$76 per prop<br>Low ranking (4, 2)           | May require review | Drivers – type and quality of water source. Size of treatment works  | Satisfactory, as Council has a dissolved air flotation water treatment works.   |
| 53                         | Pumping cost                              | \$13 per prop<br>High ranking (2, 1)          | Good               | Drivers – topography, development density and location of water source.  |   |
| 55                         | Water main cost                           | \$93 per prop<br>Low ranking (4, 4)           | May require review | Drivers – age and condition of mains. Ground conditions. Development density.  |   |
| 56                         | Capital expenditure                       | \$53 per prop                                 |                    | An indicator of the level of investment in the business.   |   |
|                            |   | Lowest ranking (5, 5)                         |                    | Drivers – age and condition of assets, asset life cycle and water source.  |   |

3. Review and comparison of the 2015-16 **Typical Residential Bill (Indicator 14)** with the projection in the later of your IWCN Strategy and financial plan and your Strategic Business Plan is **mandatory**. Refer to page 104 of the 2014-15 NSW Performance Monitoring Report.  
In addition, if both indicators 43 and 44 are negative, you must report your proposed 2016-17 typical residential bill to achieve full cost recovery.

4. **Microbiological compliance (Indicator 20)** is a **high priority** for each NSW LWU. Corrective action for non-compliance ( $\leq 97\%$ ), or any 'boil water alerts' must be reported in your Action Plan. Refer to pages 7, 8 and 26 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).



Coffs Harbour City Council Water Supply TBL Report (Page 1)

Coffs Harbour City CouncilTBL Water Supply Performance2014-15

WATER SUPPLY SYSTEM - Coffs Harbour City Council serves a population of 71,300 (25,060 connected properties). Water is sourced from the Nymboida River (part of the Regional Water Supply which includes Shannon Creek Dam) and also from the Orara River. Water is transferred to Karangi Dam where it is treated and supplied to the Coffs Harbour area which stretches from Sawtell to Corindi. Council has 2 storage dams at Karangi and Woolgoolga (total storage capacity 5,870ML), not including the 30,000ML Shannon Creek Dam. Council has 2 smaller systems providing treated water to Coramba and Nana Glen villages. The water supply network comprises a dissolved air flotation treatment works, a conventional water treatment works and a chlorinator, 18 service reservoirs (88 ML), 7 pumping stations, 43 ML/d delivery capacity into the distribution system, 157 km of transfer and trunk mains and 478 km of reticulation. 95% of water supplied is potable and 5% nonpotable (recycled).

PERFORMANCE - Coffs Harbour City Council achieved 100% implementation of the outcomes required by the NSW BPM Framework. The 2015-16 typical residential bill was \$588 which was close to the statewide median of \$593 (Indicator 14). The economic real rate of return was similar to the statewide median (indicator 43). The operating cost (OMA) per property was \$395 which was close to the statewide median of \$400 (Indicator 49). Water quality complaints were negligible compared to the statewide median of 3 (Indicator 25). Compliance was achieved for microbiological water quality (100% of the population, 3 of 3 zones compliant), chemical water quality and physical water quality. There were no failures of the chlorination system or the treatment system. Coffs Harbour City Council reported no water supply public health incidents. Current replacement cost of system assets was \$423M (\$15,900 per assessment). Cash and investments were \$29.4M, debt was \$77M and revenue was \$22M (excluding capital works grants).

IMPLEMENTATION OF OUTCOMES REQUIRED BY THE NSW BEST-PRACTICE MANAGEMENT (BPM) FRAMEWORK

|  |                   |  |      |
|--|-------------------|--|------|
| (1) Complete Current Strategic Business Plan & Financial Plan              | YES <sup>12</sup> | (3) Sound water conservation implemented             | YES  |
| (2) (2a) Pricing - Full Cost Recovery, without significant cross subsidies | Yes               | (4) Sound drought management implemented             | YES  |
| (2b,2c) Pricing - Appropriate Residential Charges                          | Yes               | (5) Complete performance reporting (by 15 September) | YES  |
| (2d) Pricing - Appropriate Non-residential Charges                         | Yes               | (6) Integrated water cycle management strategy       | YESC |
| (2e) Pricing - DSP with Commercial Developer Charges                       | Yes               | IMPLEMENTATION OF ALL OUTCOMES                       | 100% |

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

| NW            |                             | No.  |  | LWU   |                              | RANKING            |  | MEDIAN    |  |
|---------------|-----------------------------|------|--|---|------------------------------|--------------------|--|-----------|--|
|               |                             |      |  | RESULT  |                              | >10,000 properties |  | Statewide |  |
|               |                             |      |  | Col 1   |                              | Note 1             |  | Note 3    |  |
|               |                             |      |  | Col 2   |                              | Note 2             |  | Note 4    |  |
|               |                             |      |  | Col 3   |                              | Col 4              |  | Col 5     |  |
| UTILITY       | CHARACTERISTICS             | C1   | Population served:   | 71300   |                              |                    |  |           |  |
|               |                             | C4   | Number of connected properties:  | 25060   | Number of assessments: 26660 |                    |  |           |  |
|               |                             |      | Residential connected properties (% of total)  |   |                              |                    |  |           |  |
|               |                             |      | New residences connected to water supply (%)   |   |                              |                    |  |           |  |
|               |                             | A3   | Properties served per kilometre of water main  | Prop/km   |                              |                    |  |           |  |
|               |                             |      | Rainfall (% of median annual rainfall)   |   |                              |                    |  |           |  |
|               |                             | W11  | Total urban water supplied at master meters (ML)   | ML  |                              |                    |  |           |  |
|               |                             |      | Peak week to average consumption (%)   |   |                              |                    |  |           |  |
|               |                             |      | Renewals expenditure (% of current replacement cost of system assets)                    |   |                              |                    |  |           |  |
|               |                             |      | Employees per 1000 properties  | per 1,000 prop  |                              |                    |  |           |  |
| SOCIAL        | CHARGES & BILLS             | P1   | Residential tariff structure for 2015-16:  | inclining block; independent of land value; access charge \$143 |                              |                    |  |           |  |
|               |                             | P1.3 | Residential water usage charge for 2014-15 for usage <365 kL (c/kL)                      | c/kL (2014-15)  | 263                          |                    |  |           |  |
|               |                             |      | Residential water usage charge for 2015-16 for usage <365 kL (c/kL)                      | c/kL (2015-16)  | 267                          |                    |  |           |  |
|               |                             | P3   | Typical residential bill for 2014-15 (\$/assessment)                                     | \$ (2014-15)  | 582                          |                    |  |           |  |
|               |                             |      | Typical residential bill for 2015-16 (\$/assessment)                                     | \$ (2015-16)  | 588                          |                    |  |           |  |
|               |                             |      | Typical developer charge for 2015-16 (\$/equivalent tenement)                            | \$ (2015-16)  | 10,100                       |                    |  |           |  |
|               |                             | F4   | Residential revenue from usage charges (% of residential bills)                          | %   | 76                           |                    |  |           |  |
|               |                             | F5   | Revenue per property - water (\$/property)   | \$/prop   | 880                          |                    |  |           |  |
|               | HEALTH                      |      | Water Supply Coverage (% of Urban Population with reticulated WS)                        | % of population   | 99.5                         |                    |  |           |  |
|               |                             | 18a  | Risk based Drinking Water Management System (DWMS)?                                      | Yes/No  | Yes                          |                    |  |           |  |
|               |                             | 19   | Physical compliance achieved? Note 10  | Yes/No  | Yes                          |                    |  |           |  |
|               |                             | 19a  | Chemical compliance achieved? Note10   | Yes/No  | Yes                          |                    |  |           |  |
|               |                             | H4   | % population with chemical compliance  | % of population   | 100                          |                    |  |           |  |
|               |                             |      | Microbiological (E. coli) compliance achieved? Note 10                                   | Yes/No  | Yes                          |                    |  |           |  |
|               | SERVICE LEVELS              | H3   | % population with microbiological compliance   | % of population   | 100                          |                    |  |           |  |
|               |                             | C9   | Water quality complaints per 1000 properties   | per 1,000 prop  | 0                            |                    |  |           |  |
|               |                             | C10  | Water service complaints per 1000 properties   | per 1,000 prop  | 0.1                          |                    |  |           |  |
|               |                             | C17  | Incidence of unplanned interruptions per 1000 properties                                 | per 1,000 prop  | 11                           |                    |  |           |  |
|               |                             | C15  | Average duration of interruption (min)   | min   | 120                          |                    |  |           |  |
|               |                             | A8   | Number of water main breaks per 100 km of water main                                     | per 100km   | 3                            |                    |  |           |  |
|               |                             |      | Drought water restrictions (% of time)   | % of time   | 0                            |                    |  |           |  |
|               |                             |      | Total days lost (%)  | %   | 3.2                          |                    |  |           |  |
| ENVIRONMENTAL | NATURAL RESOURCE MANAGEMENT | W12  | Average annual residential water supplied - STATEWIDE (kL/property)                      | kL/prop   | 167                          |                    |  |           |  |
|               |                             | 33a  | Average annual residential water supplied - COASTAL LWUs (kL/property)                   | kL/prop   | 167                          |                    |  |           |  |
|               |                             | 33b  | Average annual residential water supplied - INLAND LWUs (kL/property)                    | kL/prop   |                              |                    |  |           |  |
|               |                             | A10  | Real losses (leakage) (L/service connection/day)   | L/connection/day  | 50                           |                    |  |           |  |
|               |                             |      | Energy consumption per Megalitre (kiloWatt hours)  | kWh/ML  | 489                          |                    |  |           |  |
|               |                             | 36   | Renewable energy consumption (% of total energy consumption)                             | %   |                              |                    |  |           |  |
| ECONOMIC      | FINANCE                     | E12  | Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 properties) | t CO2   | 490                          |                    |  |           |  |
|               |                             |      | Current replacement cost per assessment (\$)   | \$/assessment   | 15,900                       |                    |  |           |  |
|               |                             | F17  | Economic real rate of return - Water (%)   | %   | 2.0                          |                    |  |           |  |
|               |                             |      | Return on assets - Water (%)   | %   | 0.6                          |                    |  |           |  |
|               |                             | F22  | Net Debt to equity - WS & Sge (%)  | %   | 13                           |                    |  |           |  |
|               |                             | F23  | Interest cover - WS & Sge  |   | 1                            |                    |  |           |  |
|               |                             |      | Loan payment per property - Water (\$)   | \$/prop   | 454                          |                    |  |           |  |
|               |                             | F24  | Net profit after tax - WS & Sge (\$'000)   | \$'000  | -3,270                       |                    |  |           |  |
|               | EFFICIENCY                  |      | Operating cost (OMA) per 100km of main (\$'000)  | \$'000  | 1,580                        |                    |  |           |  |
|               |                             | F11  | Operating cost (OMA) per property (\$/prop) Note 8                                       | \$/prop   | 395                          |                    |  |           |  |
|               |                             |      | Operating cost (OMA) per kilolitre (cents)   | c/kL  | 161                          |                    |  |           |  |
|               |                             |      | Management cost (\$/prop)  | \$/prop   | 153                          |                    |  |           |  |
|               |                             |      | Treatment cost (\$/prop)   | \$/prop   | 76                           |                    |  |           |  |
|               |                             |      | Pumping cost (\$/prop)   | \$/prop   | 13                           |                    |  |           |  |
|               |                             |      | Energy cost (\$/prop)  | \$/prop   | 9                            |                    |  |           |  |
|               |                             |      | Water main cost (\$/prop)  | \$/prop   | 93                           |                    |  |           |  |
|               |                             | F28  | Capital Expenditure (\$/prop)  | \$/prop   | 53                           |                    |  |           |  |

- NOTES :
- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with >10,000 properties).
  - Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs).
  - Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
  - Col 5 (National Median) is the median value for the 76 utilities reporting water supply performance in the National Performance Report 2014-15 ([www.bom.gov.au](http://www.bom.gov.au)).
  - LWUs are required to annually review key projections & actions in the later of their IWCM Strategy and financial plan and their Strategic Business Plan and to annually 'roll forward', review and update their 30-year total asset management plan (TAMP) and 30-year financial plan.
  - 2015-16 Non-residential Tariff: Access Charge based on Meter Size: 40mm \$572, Two Part Tariff: Usage Charge 267c/kL.
  - Non-residential water supplied was 25% of potable water supplied excluding non-revenue water.
  - Non-residential revenue was 24% of annual rates and charges, indicating fair pricing of services between the residential and non-residential sectors.
  - The operating cost (OMA) per property was \$395. Components were: management (\$153), operation (\$108), maintenance (\$104), energy (\$9) & chemical (\$17).
  - Rehabilitations included 0.3% of water mains, 0.14% of service connections and 5.8% of water meters. Renewals expenditure was \$12,000/100km of main.
  - Compliance with ADWG 2011 for drinking water quality is shown as "Yes" if compliance has been achieved (indicators 19, 19a & 20).
  - Coffs Harbour City Council has 3 fully qualified water treatment operators who meet the requirements of the National Certification Framework.
  - As Council's IWCM Strategy is over 6 years old, it will need to prepare a new 30-year IWCM Strategy, financial plan and report in accordance with the July 2014 IWCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).



Coffs Harbour City Council Water Supply TBL Report (Page 2)

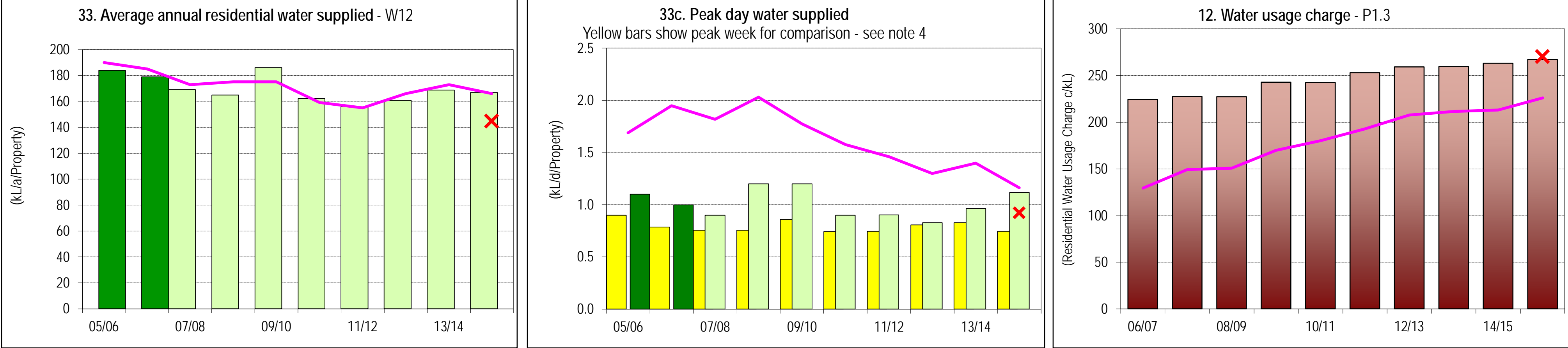
Coffs Harbour City Council

TBL Water Supply Performance (page 2)

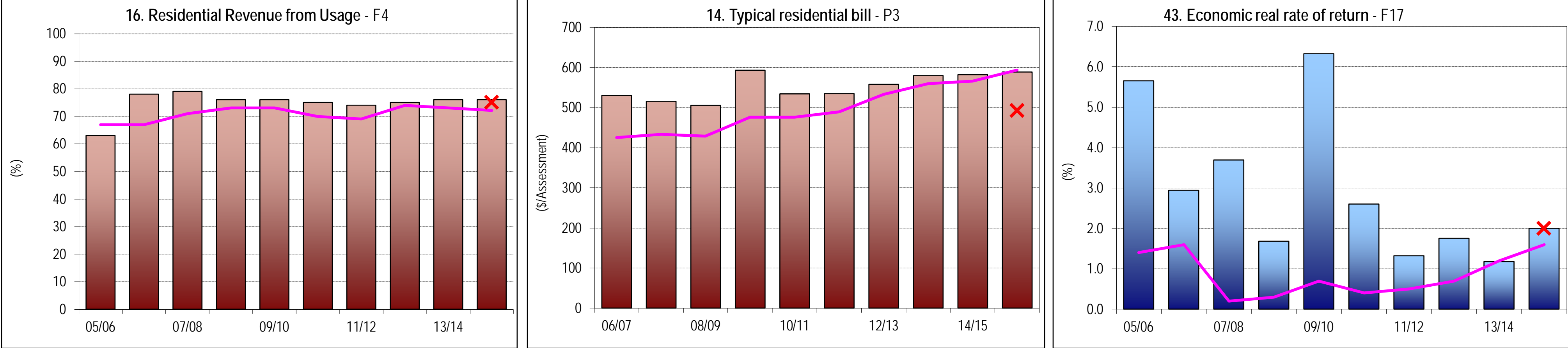
2014-15

(Results shown for 10 years together with Statewide Median and 2014-15 Top 20%)

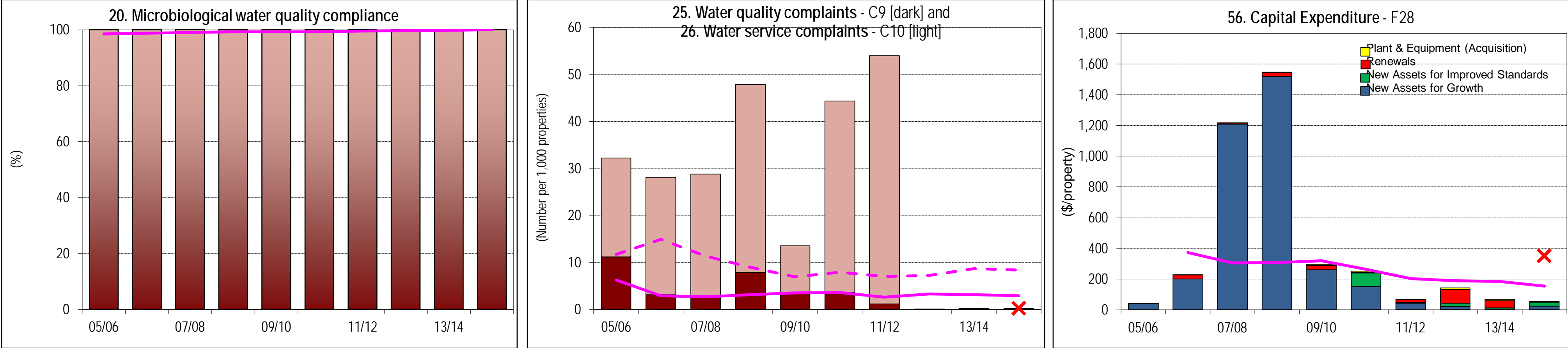
RESIDENTIAL USE/REVENUE FROM USAGE



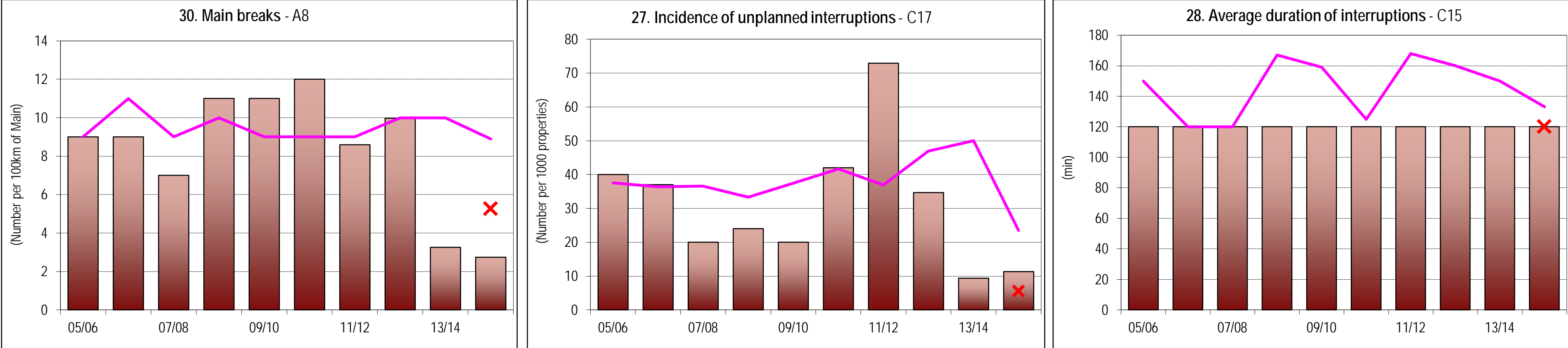
COST RECOVERY



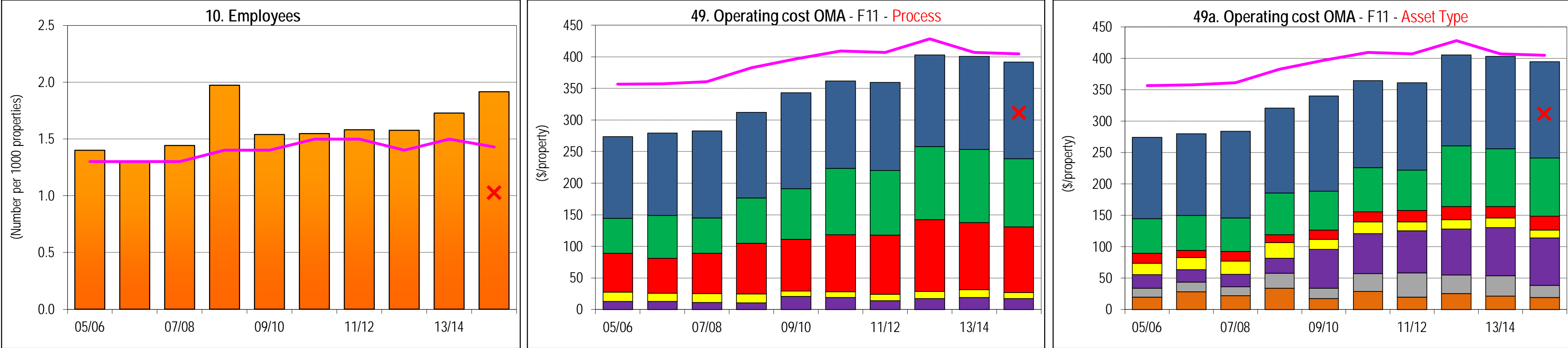
WATER QUALITY/CUSTOMER SERVICE/CAPITAL EXPENDITURE



RELIABILITY



EFFICIENCY



NOTES:  
1. Costs are in Jan 2015\$ except for graphs 12 and 14, which are in Jan 2016\$.  
2. Microbiological water quality compliance 1999-00 to 2003-04 was on the basis of 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines for E. coli; from 2004-05 to 2010-11 compliance was on the basis of the 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) and for 2011-12 to 2014-15 compliance was on the basis of the 2011 ADWG.  
3. Indicators 33 and 33c - Green shading of bars shows % of time Drought Water Restrictions applied in each year:  
4. Indicator 33c - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied shown in green.

LEGEND  
State Median for all years  
Top 20% for 2014-15

0 - 30%  
30-50%  
>50% of time

## 6 GENERAL NOTES

This *2014-15 NSW Water Supply and Sewerage Benchmarking Report* provides the full suite of performance indicators and benchmarking data to enable each LWU to improve its productivity and performance through benchmarking its performance against that of similar LWUs. The benchmarking report is available on the DPI Water website ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

- (1) **Triple bottom line (TBL) focus** – to provide a balanced view of the long-term sustainability of NSW LWUs, a triple bottom line accounting focus has been adopted, with performance reported on the basis of **social, environmental** and **economic** performance indicators.
- (2) **Data validation** – independent auditing and data validation (Appendix H on page 351) assure data reliability for the NSW Performance Monitoring System. The data validation procedures include matters such as:
  - Aggregated businesses (section H4.1 on page 353)
  - Assessments (section H4.2 on page 353)
  - Connected properties (section H4.2 on page 353)
  - Charges, bills and cost recovery (section H4.3 on page 354)
  - Urban water supplied (section H4.4 on page 354)
  - Operating cost and management cost (section H4.5 on page 354)
  - Drinking water quality compliance (section H4.6 on page 355)
  - Sewage treatment works compliance (section H4.7 on page 356)
  - Implementation of Best-Practice Management Framework (section H5 on page 356)
- (3) **Figures and tables** – Most of the figures in this report show performance indicators for each of the last six years to enable review of trends and to facilitate benchmarking and ‘yardstick’ comparisons. The figures show ranked results for LWUs grouped into four size ranges in order to enable each LWU to compare its performance against similar sized LWUs. The better performing LWUs are shown at the left of each group.  
  
 Table 5 and Tables 6 to 18 show water supply and sewerage performance indicators for each of the 109 NSW water utilities (105 LWUs plus Sydney Water Corporation and Hunter Water Corporation, Water NSW (from January 2015, formerly Sydney Catchment Authority) and Hawkesbury Council).  
  
 As noted on page 2, these tables are sorted in order of the number of connected properties served in order to facilitate comparisons with similar sized LWUs. The table on page 2 shows each LWU’s ranking in terms of water supply connected properties. For example, the table shows ‘11 Albury City’, indicating that Albury City is the 11th largest LWU. To facilitate comparisons, the tables are also grouped into the same four size ranges as for the figures. Also, the median for many of the indicators are shown for each size grouping.
- (4) **Statewide medians** – This report refers to statewide medians which are calculated on a ‘percentage of connected properties’ basis rather than a ‘percentage of LWUs’ basis. This is a weighted median on the basis of connected properties, which best reveals statewide performance by giving due weight to larger LWUs and reducing the effect of smaller LWUs. LWU rankings on a ‘percentage of LWUs’ basis are also provided where appropriate (e.g. for comparison of LWUs in the ‘Ranking’ columns of the two page TBL Performance Report for each utility (example on page 30 and in Appendix C on page 274). Statewide medians are shown in Tables 1, 2 and 2A on pages 105, 106 and 107. Table 4 on page 111 shows trends in statewide performance indicators for regional NSW and comparisons with the national median for the 80 utilities reported in the National Performance Report 2014-15 for Urban Water Utilities. This data provides valuable contextual information to inform each LWU’s future water supply and sewerage planning and to supplement the water planning information reported by each LWU (final paragraph of footnote 5 on page 3).
- (5) **Typical residential bill (TRB)** – The typical residential bill per assessment is the annual bill paid by a residential customer using the LWU’s average annual residential water supplied and is the principal indicator of the overall cost of a water supply or sewerage system. Pensioners pay a lower amount due to the \$87.50 pensioner rebate as do owners of vacant lots as they pay no water usage charges. Refer also to page 17.

**Calculation of TRB** – The 2015-16 typical residential bill is based on a customer of the LWU's principal water supply or sewerage system using the LWU's 2014-15 average annual residential water supplied (see Tables 6 and 7 on pages 134 and 146). The typical residential bill for 2014-15 and previous years is based on the reported average annual residential water supplied for that year (the 2014-15 residential water supplied is shown in column 17 of Table 5 on page 116). Refer also to section H4.3 on page 354.

- (6) **Total urban water supplied** – Total urban water supplied comprises the sum of the potable water supplied plus the non-potable water supplied (column 2 of Table 5 on page 116 and Figure 9 on page 47). Recycled water is a component of the non-potable supply which also includes raw water.
- (7) **Average annual residential water supplied** – The average annual residential water supplied per connected property (col 17 of Table 5) includes both potable and non-potable water supplied. Where an LWU has not separately reported its residential water supplied, it has been estimated using the statewide average of 58 per cent of the LWU's total potable water supplied. The potable residential water supplied per property is shown in column 14a of Table 6 on page 134. The potable water supplied and the total water supplied (potable + non-potable) have been separately reported for the 12 LWUs with a dual water supply (see note 8 below).
- (8) **Dual supplies** – Twelve LWUs had a dual water supply to over 50 per cent of their residential customers in July 2014 (i.e. with a potable supply for indoor use and a non-potable supply for outdoor use).

The total annual residential water supplied (i.e. potable + non-potable) kilolitres per property for those LWUs with a dual water supply is shown below, together with their potable residential water supplied in brackets. These volumes were: Balranald 660 (167), Berrigan 399 (241), Bourke 1,243 (284), Brewarrina 1,391 (614), Central Darling 581 (128), Hay 1,048 (159), Jerilderie 1,242 (219), Murray 280 (168), Wakool 502 (142), Walgett 1,341 (720), Warren 752 (328) and Wentworth 504 (99).

The TRB has been calculated for those LWUs with a dual supply using the above volumes.

- (9) **Water losses** – For consistency with national and international performance reporting, water losses comprise *Real Losses* (mostly leakage) plus *Apparent Losses* (under-registration of customer meters and illegal use). *Unbilled Water* supplied (firefighting and mains flushing) is not a water loss but is a component of non-revenue water (NRW) (below and note 10). Real losses and NRW apply to the potable water supply only.

As noted on page 16, NWI Indicator A10 (real losses in L/connection/d) is the relevant measure for **tracking a LWU's leakage performance over time** for most LWUs. Each LWU's real losses (L/connection/d) are shown in column 18 of Table 5 on page 116, column 41 of Table 10 on page 172 and Figure 28 on page 66. Refer also to figure 34 on page 112.

Due to perverse impacts shown on page 15, it is inappropriate to track a utility's leakage as a percentage of the total water supplied. Similarly, use of Unaccounted for Water (UFW) is not appropriate. Rather 'Non Revenue Water (NRW)' (L/connection/d) should be used, as recommended by the International Water Association – Reference: Kenneth J Brothers, Assessing UFW and Variable Water Rate Impacts, Use and Loss Metrics in a Declining Water Consumption Environment, IWA Water Loss Conference, 2012, February 2012, Manila, Philippines.

NRW (L/connection/d) is shown in column 41f of Table 10 on page 172 and Figure 29 on page 67.

In addition, the 2014-15 adopted volume of NRW (NWI Indicator W10.1) and NRW as a percentage of the total potable water supplied are shown in columns 15 and 16 of Table 8A on page 159.

- (10) **Minimum real loss and NRW** – Further to note 9 above, the NSW Performance Monitoring System determines minimum values for each LWU's real loss and NRW as shown below.

Leakage studies for 74 NSW LWUs indicate an average leakage from potable water supply distribution systems of 3% to 13% of total potable water supplied, as shown in column 41e of Table 10 on page 172. These utilities have recently carried out a reservoir drop test, waste metering or night flow analysis to determine their real losses and opportunities for leakage reduction. Only 13 of these utilities had a real loss of under 6%. In addition, Table 10A on page 175 discloses the real losses for 68 LWUs 'before' and 'after' leakage reduction under the Regional NSW Water Loss



Management Program<sup>21</sup>. For these LWUs, Table 10A indicates average real losses of 10% of the potable water supplied after leakage reduction.

Accordingly, a minimum real loss (mostly leakage) of 6% of the total potable urban water supplied (NWI Indicator W11.1) has been adopted. Reported real losses of less than 6% have only been accepted where the utility has provided evidence to support the adoption of a lower value. Where such evidence has not been provided, real losses have been increased to 6% of the total potable urban water supplied (W11.1) and are shown in italics bold in column 8 of Table 8 on page 155. Refer also to the final paragraph below on NRW and to the 3rd paragraph of page 16.

Similarly, statewide analysis of **NRW** (*Real Losses*, *Apparent Losses* and *Unbilled Water* supplied (refer to note 9 above)) for NSW water utilities other than bulk water suppliers, indicates a minimum of 10% of the potable water supplied.

Accordingly, a **minimum NRW** of 10% of the total potable urban water supplied (W11.1) has been adopted. Where a LWU has reported NRW of less than 10% of the potable water supplied, the reported NRW has been increased to 10%, unless the LWU has provided evidence of a Real Loss of less than 6%. In such cases, the adopted value for NRW has been determined as the Real Loss plus 4%. Any increases to the real loss (above) or to the NRW (W10.1) have also been applied to W11.1. The adjusted values of the real loss, NRW (W10.1) and the total potable urban water supplied (W11.1) are shown in italics bold in columns 8, 9 and 10 of Table 8 on page 155.

- (11) **Sydney Water, Hunter Water and Water NSW** – The performance indicators for Sydney Water Corporation, Hunter Water Corporation and Water NSW (from January 2015, formerly Sydney Catchment Authority) were obtained from the *National Performance Report 2014-15 for Urban Water Utilities*.
- (12) **Bulk storage** – Utilities that provide bulk storage dams for their water supply incur significant capital and operating costs for these facilities, resulting in a higher typical residential bill and operating cost per property (refer to item 5 on page 18). The following 45 regional utilities provided such bulk storage: Armidale, Ballina, Bathurst, Bega Valley, Bourke, Brewarrina, Byron (Mullumbimby), Cabonne, Central Tablelands, Clarence Valley, Cobar, Coffs Harbour, Essential Energy, Eurobodalla, Fish River, Glen Innes-Severn, Gosford, Goulburn Mulwaree, Guyra, Inverell, Kempsey, Kyogle, Lachlan, Leeton, Lithgow, MidCoast, Mid Western Regional, Moree Plains, Orange, Palerang, Parkes, Port Macquarie-Hastings, Richmond Valley, Rous, Shoalhaven, Tamworth, Tenterfield, Tweed, Upper Hunter, Upper Lachlan, Uralla, Warrumbungle, Wingecarribee, Wyong, Yass Valley. Refer also to column 37 of Table 5B on page 123.
- (13) **Unfiltered** – A utility with over 50 per cent of its supply comprising an unfiltered surface water supply i.e. the utility does not have a water treatment works providing filtration and disinfection for >50 per cent of its supply.
 

**Groundwater** – A utility with >50 per cent of its supply comprising good quality unfiltered groundwater.

**Reticulator** – A utility which purchases >70 per cent of its source water from a bulk supplier and reticulates water to householders in its area.

**Bulk supplier** – A utility which provides a bulk water supply to other utilities, rather than reticulating water to householders.

**Dual supply** – A utility with a potable reticulated water supply for indoor uses and a separate non-potable supply reticulated for outdoor uses to over 50 per cent of its residential customers (refer to note 8 on page 33).
- (14) **National Water Initiative (NWI) Indicators** – There are 32 NSW water utilities with >10,000 connected properties including three metropolitan utilities and 29 regional utilities. These utilities have reported their performance in the *National Performance Report 2014-15* ([www.bom.gov.au](http://www.bom.gov.au)) based on a nationally agreed framework of indicator definitions. The reported NWI performance indicators (including key financial performance indicators) have been independently audited. The results that have met the rigorous NWI auditing requirements have been published in the National Performance

<sup>21</sup> Refer to Table 10A on page 175. In addition, results from the Regional NSW Water Loss Management Program (WLMP) are available at <http://www.lgsa.org.au/policy/water/water-loss-management-program>.



Report 2014-15 and are shown in Appendix F on page 316. Appendix F discloses the NSW results for all the approximately 130 NWI performance indicators. Some of the reported non-financial performance indicators failed to meet the NWI auditing requirements. These results have been excluded from both the *National Performance Report 2014-15* and Appendix F. However they have been included in the Figures and in Tables 5 to 18 of this report.

In addition, the reported values for the 30 NWI financial performance indicators have been independently audited for all the NSW local water utilities (footnote 48 on page 353).

- (15) **Reported NWI Indicators** – This report discloses the performance of each of the 105 NSW Local Water Utilities (LWUs) for each of the approximately 130 NWI performance indicators on the following basis:

**Table 5** on page 116 reports the results for NWI indicators C4, W11, F4, P3, P6, P8, H3, H4 (expressed as % population), C9, C15, A8, C13, W12, A10, E4, A14, W27, W26, F1+F2, F22, F28+F29, F16, F17, F18, F11 and F12.

**Table 5A** on page 120 reports the results for NWI indicators F13, F7, F3, the sum of F28 and F29, F19, F22, F23, F20, F21, F25, F8, F24 and F30.

**Table 5B** on page 123 reports the results for NWI indicators C12, C14, E9, E10, E11 and E12.

**Table 5C** on page 126 reports indicators F9, F14, F11, F22, F17, A8, C17, A10, C9, C10, H3 and P3.

**Table 5D** on page 130 reports indicators F10, F15 F12, F22, F18, A14, C11, E4 and P6.

**Table 6** on page 134 reports indicators P1, P1.2, P1.12, P1.3, P1.4, P3, F17, F4, W12 and C4.

**Table 7** on page 146 reports indicators P4.1, P4.2, P6, F18 and C8.

**Table 8** on page 155 reports the results for NWI indicators W8.1, W9.1, W10.1, W11.1, W20, the sum of W21 and W25, W11.2, W8.2, the sum of W9.2 and W10.2, W14, the sum of W22, W23 and W24, W26, W1, W2, W4, W5 and W7.

**Table 8D** on page 166 reports the results for NWI indicators W9.1, W9.2, W9, W11.3, W21 & W28.4.

**Table 9** on page 169 reports the results for NWI indicators C4, C2, C1, A2, A3, A1, F28, F14 & F26.

**Table 10** on page 172 reports the results for NWI indicators A10, A11, A9, A8, C17, W11 and W12.

**Table 10A** on page 175 reports the results for NWI indicators A9, W11.1 and A10.

**Table 11** on page 180 reports the results for NWI indicators F1, F5, F4, F9, F22, F17 and F11.

**Table 12** on page 183 reports the results for NWI indicators H5, H4, H3, C9, C10, C18, C19, C17 and C15.

**Table 14** on page 189 reports the results for NWI indicators C8, C6, C5, A5, A6, A4, F15 and F27.

**Table 15** on page 192 reports the results for NWI indicators A14, E13, W18, W17, E4, E1, E2, E3, W19, E8, W26 and W27.

**Table 16** on page 195 reports the results for NWI indicators F2, F6, F10, F22, F18 and F12.

**Table 17** on page 198 reports the results for NWI indicators E4, C11, C13 and C16.

The results for NWI indicators P8; F3 and F16; F19; C13; A3 and A2; W11; P3; P1.3; F4; C9; C10; A8; W12; A10; F17; F11; C11; E4; A6 and A5; P6; A14; E13; W27; F18 and F12 are shown on Figures 1, 2, 3, 6, 8, 9, 11, 12, 13, 19, 20, 21, 26, 27, 28, 32, 33, 40, 42, 48, 54, 55, 56, 57, 61 and 62 respectively.

The following NWI indicators have not been shown in the tables but can be determined as follows: W16 from (W18–W17), C3 from (C4–C2), C7 from (C8–C6). Indicator H1 refers to the 2011 ADWG for all LWUs.

All the NSW LWUs have complied with indicators H1, H3 and H4. Results for indicator H5 is reported in Table 12 on page 183.

## 6.1 Regional Water and Sewerage Treatment Officers - DPI Water

| Area        | Name            | Mobile       | Email  |
|-------------|-----------------|--------------|--|
| Albury      | Patrick Freeman | 0429 308 954 | <a href="mailto:Patrick.Freeman@dpi.nsw.gov.au">Patrick.Freeman@dpi.nsw.gov.au</a> |
| Alstonville | Terry Call      | 0412 283 768 | <a href="mailto:Terry.Call@dpi.nsw.gov.au">Terry.Call@dpi.nsw.gov.au</a>           |
| Cootamundra | Bernie Barnes   | 0429 604 409 | <a href="mailto:Bernie.Barnes@dpi.nsw.gov.au">Bernie.Barnes@dpi.nsw.gov.au</a>     |
| Dubbo       | Bruce Lamont    | 0458 268 453 | <a href="mailto:Bruce.Lamont@dpi.nsw.gov.au">Bruce.Lamont@dpi.nsw.gov.au</a>       |
| Newcastle   | Graham Campbell | 0419 620 990 | <a href="mailto:Graham.Campbell@dpi.nsw.gov.au">Graham.Campbell@dpi.nsw.gov.au</a> |
| Orange      | Chris Carlon    | 0419 624 526 | <a href="mailto:Chris.Carlon@dpi.nsw.gov.au">Chris.Carlon@dpi.nsw.gov.au</a>       |
| Tamworth    | Trent Betts     | 0417 458 247 | <a href="mailto:Trent.Betts@dpi.nsw.gov.au">Trent.Betts@dpi.nsw.gov.au</a>         |
| Wollongong  | Geoff Parish    | 0427 248 007 | <a href="mailto:Geoff.Parish@dpi.nsw.gov.au">Geoff.Parish@dpi.nsw.gov.au</a>       |

As noted on pages 10 and 24, assistance is available from your DPI Water Regional Water and Sewerage Treatment Officer for achieving microbiological water quality compliance and for addressing other water and sewage treatment issues.

## 6.2 National Certification Framework for Water Treatment Operators

### National Certification Framework for Water Treatment Operators

Appendix I on page 360 discloses that **each** of the **91 NSW LWUs** responsible for providing water treatment<sup>#</sup> has at least one **fully qualified water treatment operator\*** to operate the 163 LWU water treatment works and 73 chlorinators and aerators<sup>+</sup>.

The LWUs have a **total** of **348** fully qualified operators, who meet the requirements of the National Certification Framework for Water Treatment Operators. Continuing professional development of operators is required, such as attending a DPI Water Treatment Update Seminar at least every 3 years.

In addition, 419 LWU operators are fully qualified Wastewater Treatment Operators, with a Certificate III in Water Operations (Wastewater Treatment) or equivalent and are employed as the operator of a LWU sewage treatment works. Such operators meet the NSW Certification requirements.

<sup>#</sup> Excludes the 9 LWUs responsible for sewerage only (page 2), reticulators Cootamundra, Harden, Queanbeyan and Young, and Cobar Water Board which provides a bulk raw water supply.

<sup>\*</sup> An operator of a water treatment works must have a Certificate III in Water Operations (Water Treatment) or equivalent and must be employed in operating a LWU treatment works or a chlorinator/aerator (refer to page 23 of *NSW Guidelines for drinking water management systems*, NSW Health and NSW Office of Water, 2013 (<http://www.health.nsw.gov.au/environment/water/Documents/NSW-Guidelines%20for-Drinking-Water-Management-Systems.pdf>)).

<sup>+</sup> An operator of a chlorinator or aerator must have a DPI Water Part 1 Certificate (Chemical Dosing Systems) or equivalent, must have also completed chlorine safety training and must be employed in operating a LWU chlorinator/aerator (refer to page 23 of *NSW Guidelines for drinking water management systems*).

## 6.3 The Australian Urban Water Sector

Appendix K on page 364 discusses the **characteristics of the Australian urban water sector**.

**NSW vs Australian Totals** – Appendix K shows that the total populations receiving water supply and sewerage services in NSW are 32% and 34% respectively of the Australian totals of 22.2 million and 20.7 million. The volume of urban water supplied in NSW is 32% of the Australian total of 2,760 GL, and the recycled water supplied in NSW is 32% of the Australian total of 269 GL.

The water and sewerage revenue for NSW is 25% of the Australian total of \$17.4 billion, the operating cost is 25% of the Australian total of \$8.3 billion and capital expenditure is 31% of the Australian total of \$3.6 billion.

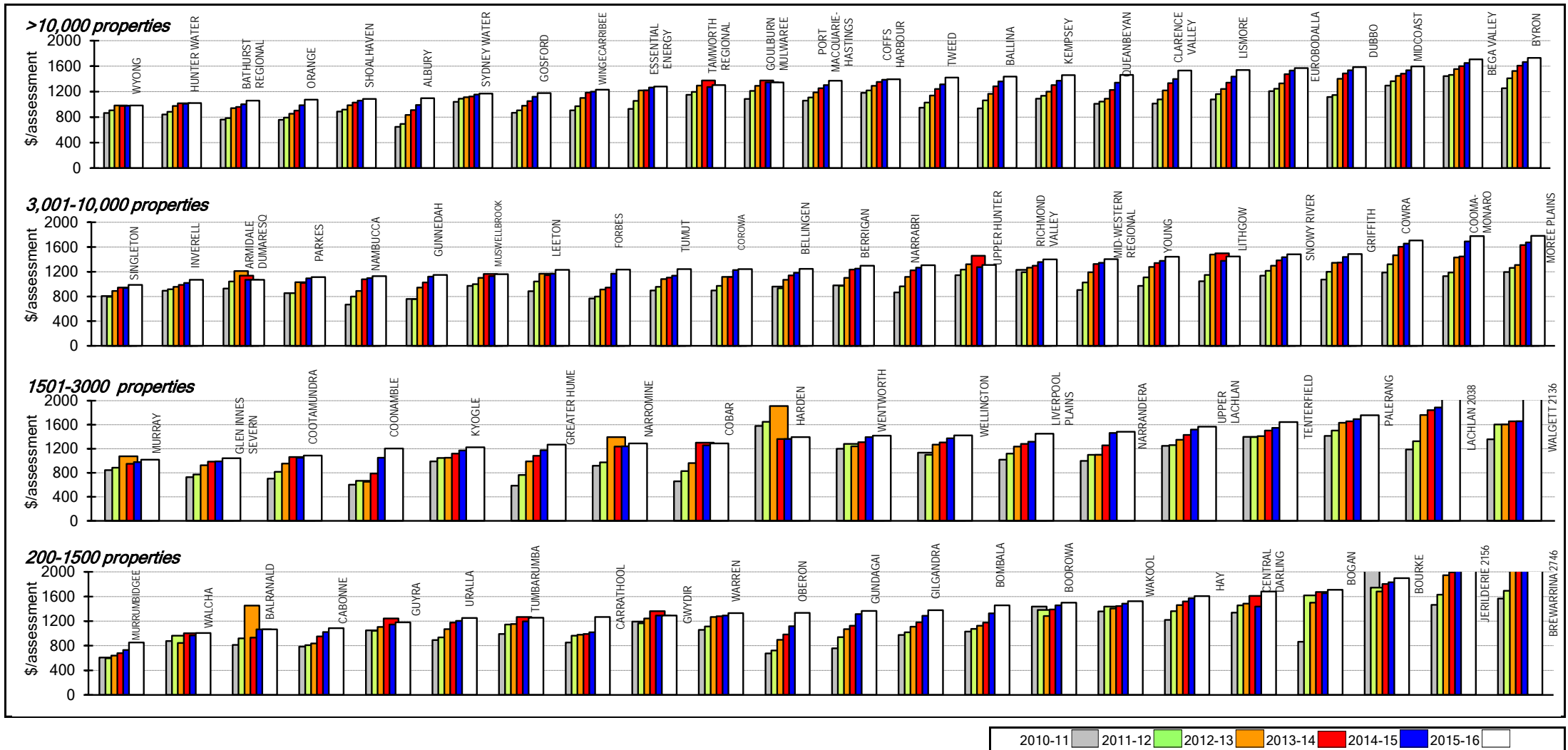
NSW has 30% of the 201,000 km of Australian water mains, 33% of the 151,000 km of Australian sewerage mains and channels, 32% of the 558 Australian water treatment works and 40% of the 869 Australian sewage treatment works.

## 6.4 Contents of tables 5 to 18

|                 |   |
|-----------------|---|
| Table 5         | 2014-15 NSW water utility performance summary – Overview of each water utility's key water supply and sewerage performance indicators.  |
| Table 5A        | Water supply and sewerage – financial – Combined water supply and sewerage indicators.  |
| Table 5B        | Water supply and sewerage – levels of service, environmental, main sources of water – Combined water supply and sewerage indicators.  |
| Table 5C        | Water supply – Infrastructure Asset Condition and Performance 2014-15   |
| Table 5D        | Sewerage – Infrastructure Asset Condition and Performance 2014-15   |
| Table 6         | Water supply – residential charges, bills, cost recovery – Type of tariff, residential charges, bills, cost recovery, average annual residential water supplied and number of connected properties  |
| Tables 6A to 6B | Water supply – 2014-15 residential inclining block or multiple tariffs, non-residential tariffs   |
| Table 7         | Sewerage – residential charges, bills, cost recovery – Residential charges, bills, non-residential sewer usage charge, cost recovery and number of connected properties for each water utility's sewerage business  |
| Tables 7A to 7C | Sewerage – 2014-15 residential multiple tariffs, non-residential tariffs, liquid trade waste fees and charges   |
| Table 8         | 2014-15 NSW urban water supplied – Water supplied by customer category, water losses, leakage, non-revenue water, total potable and non-potable water supplied, recycled water use and surface and groundwater use  |
| Table 8A        | 2014-15 Water losses and non-revenue water  |
| Table 8B        | 2014-15 Water consumptions from source catchments in regional NSW – Shows details of water consumptions by customer category for each source catchment  |
| Table 8C        | 2014-15 Water conservation initiatives  |
| Table 8D        | 2014-15 Components of commercial, industrial and rural water supplied, municipal water used, potable water produced, urban stormwater used  |
| Table 9         | Water supply – utility characteristics – Population [permanent, peak], no. of assessments, no. of service connections, connected properties, new residential dwellings connected, assets employed, capital investment, workforce employed, employees undergoing training, outsourcing, days lost        |
| Table 10        | Water supply – asset management, water resource management – Leakage, Non-Revenue Water (NRW), main breaks, interruptions to supply, rehabilitations, renewals and maintenance expenditure, total annual & average residential water supplied, recycled water use, drought & demand management policies |
| Table 10A       | Estimated Real Water Losses from Regional Water Loss Management Program – Zone, ILI before, estimated water loss - before and after, annual water savings, leakage test and the test year   |
| Table 11        | Water supply – financial, efficiency – Revenue, residential revenue and water supplied, current replacement cost, net debt to equity, cross subsidies, operating result, externalities, loan payment, operating cost (OMA) and management cost  |
| Table 12        | Water supply – health, levels of service – Physical, chemical and e. coli water quality compliance, water quality complaints, water service complaints, customer inquiries, customer restrictions and legal action, customer interruption incidence and drought water restrictions                      |
| Table 13        | Water Supply – benchmarking cost data – Disaggregated benchmarking cost data including operating cost, management cost, retail/wholesale cost, pumping cost, treatment cost and water main cost (pages 111, 112, 275)   |
| Table 14        | Sewerage – utility characteristics – Population (permanent, peak), no. of assessments, connected properties, new residential dwellings connected, assets employed, capital investment, workforce employed, employees undergoing training, outsourcing, days lost  |
| Table 15        | Sewerage – asset management, resource management – Infiltration, interruptions to service, rehabilitations, renewals, maintenance expenditures, volume of sewage collected/treated, biosolids reused, per cent effluent reclaimed   |
| Table 16        | Sewerage – financial, efficiency – Revenue, current replacement cost, debt to equity, cross subsidies, operating result, externalities, loan payment, operating cost (OMA) and management cost  |
| Table 17        | Sewerage – environmental, levels of service – BOD and SS compliance, sewage treated that was compliant, STW compliance, odour complaints, service complaints, customer inquiries, average sewerage interruption   |
| Table 18        | Sewerage – benchmarking cost data – Disaggregated benchmarking cost data including operating cost, management cost, retail / wholesale cost, pumping cost, treatment cost and sewer main cost (pages 114, 277)  |

## 7. WATER SUPPLY AND SEWERAGE FIGURES

Figure 1: Typical residential bill – water supply and sewerage - P8

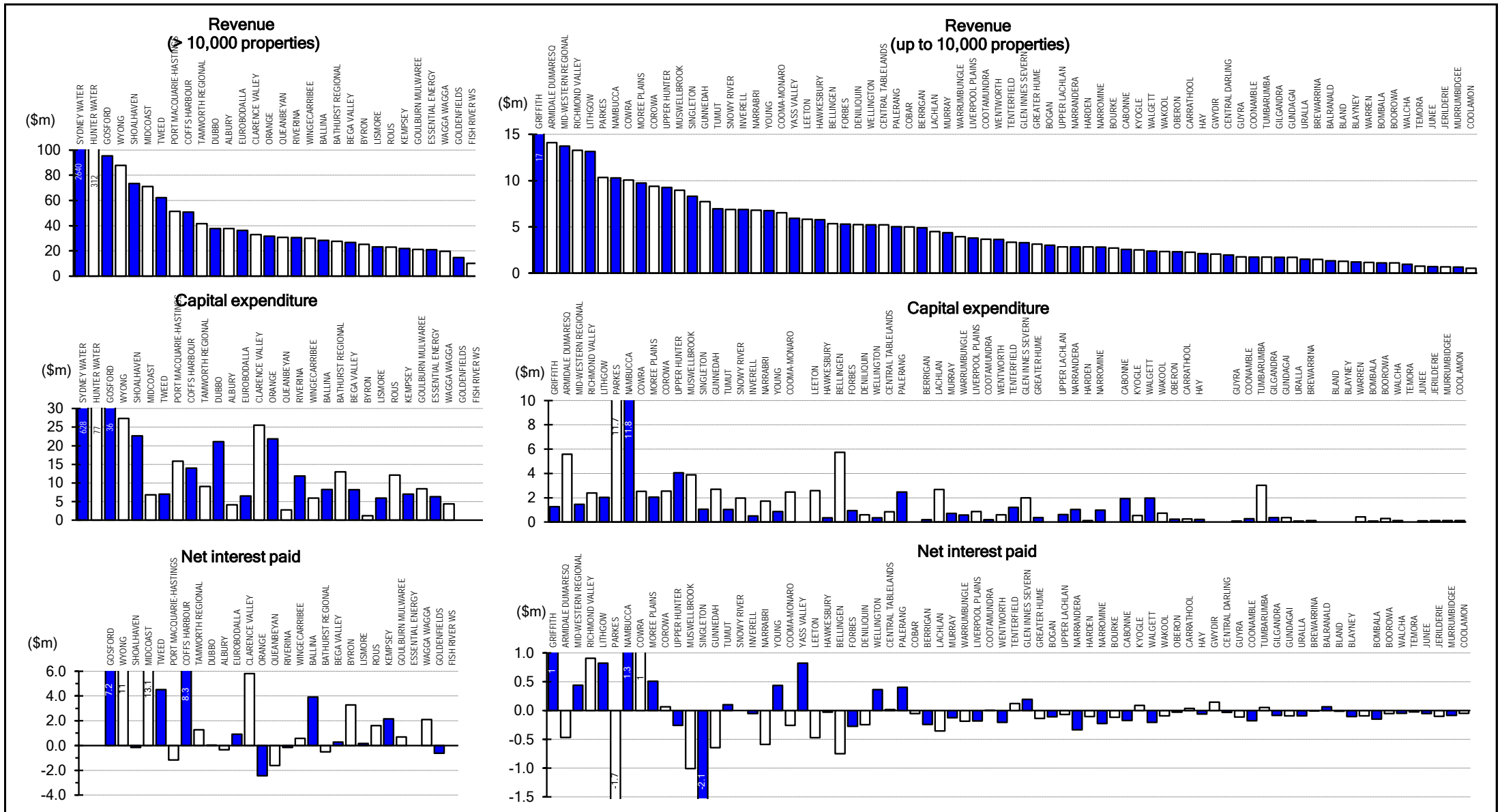


**Parameter:** (2014-15 Average Residential Water Supplied x 2015-16 Water Usage Charge) + 2015-16 Water and Sewerage Access Charges

**Notes:**

1. This figure shows ranked values of the 2015-16 typical residential water bill for water supply and sewerage for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2015-16 typical residential water bill for water supply and sewerage for the 24 LWUs shown ranges from \$987 to \$1780. Results for the previous 5 years are also shown in Jan 2016\$.
2. The 2015-16 Statewide median typical residential bill for water supply and sewerage is \$1,290 per assessment [National Median is \$1320 for 2014-15]. Refer also to Table 5 on page 116, graph 7 on page 206 and figure 2a on page 115.
3. Refer also to pages 7 and 33 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).
4. For general notes see page 32.

Figure 2: Revenue (F1 + F2), capital expenditure (F16), net interest paid - water supply and sewerage



**Parameter:** [Total revenue (W\_13 + S\_14) - grants for acquisition of assets (W\_11a + S\_12a)] ÷ 1,000,000

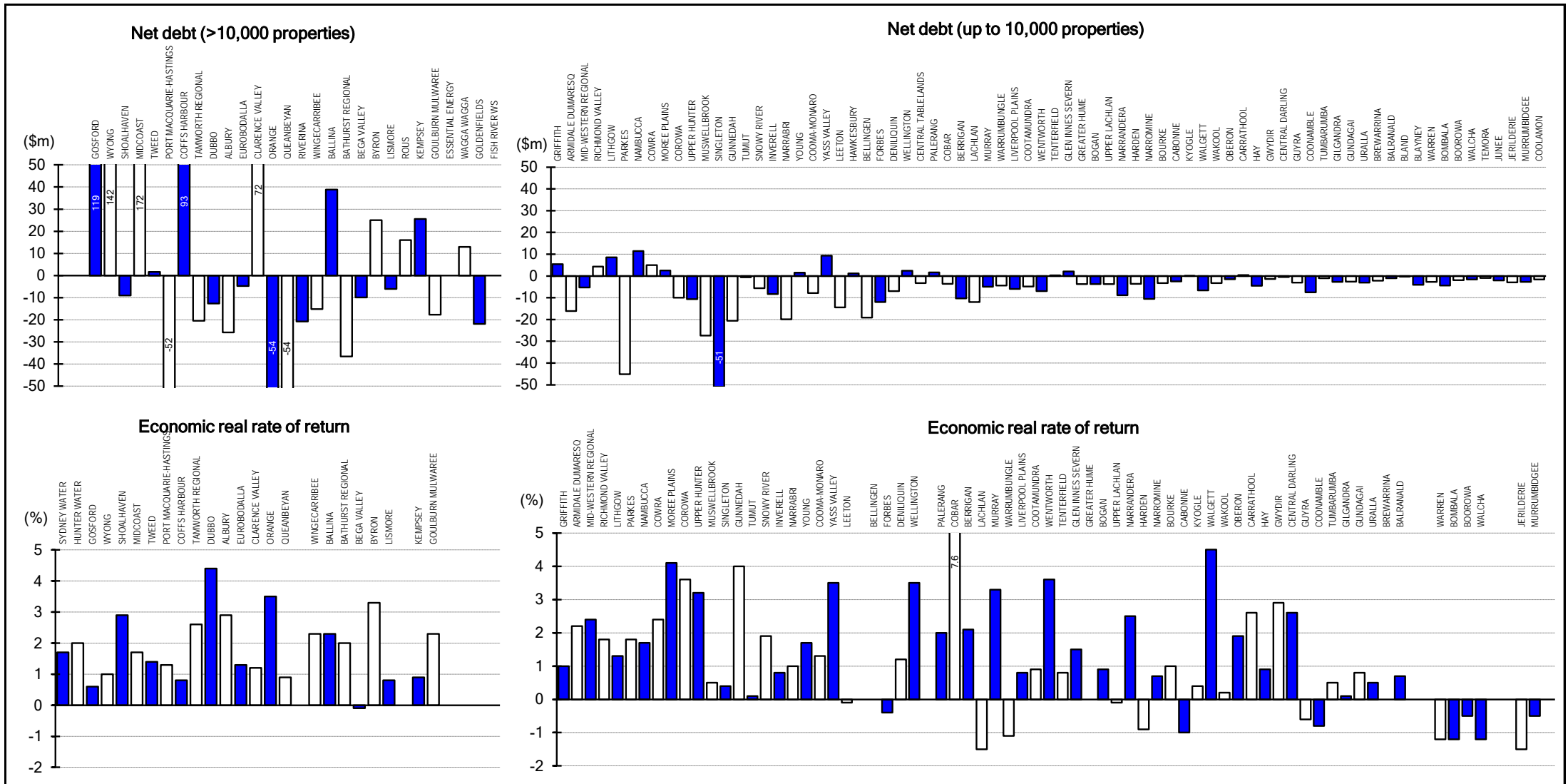
**Parameter:** Acquisition of fixed assets (W\_16 + S\_17)

**Parameter:** Interest expense (W\_4a + S\_4a) - interest income (W\_9 + S\_10)

**Notes:**

1. Utilities are ranked on the basis of revenue (see the top graph). Revenue for Sydney Water was \$2,640M and Hunter Water's revenue was \$312M.
2. Refer also to Table 3 on page 108, Table 5 on page 116 and graphs 30 and 31 on page 212.
3. For general notes see page 32.

Figure 3: Net debt, economic real rate of return (F19) - water supply and sewerage



**Parameter:** [Borrowings (W\_39 + S\_40) + bank overdraft (W\_37 + S\_38)] - cash and investments (W\_30 + S\_31)

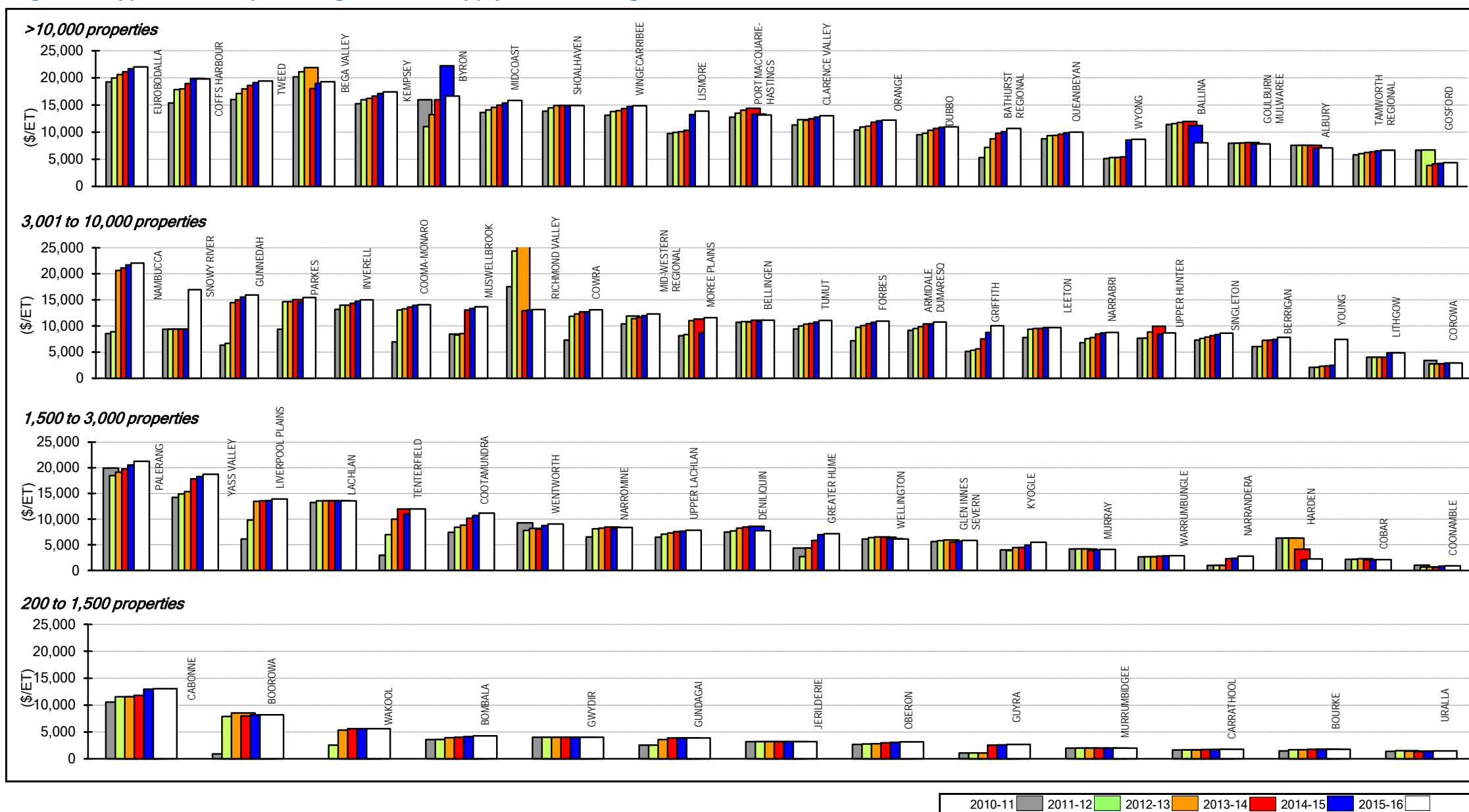
**Parameter:** [Revenue from operations (W\_13 + S\_14) - OMA & current cost depreciation (W\_1 + W\_2 + W\_3 + S\_1 + S\_2 + S\_3) - interest income (W\_9 + S\_10) - grants for acquisition of assets (W\_11a + S\_12a)]  
Written down replacement cost of system assets, plant & equipment (W\_47 + W\_33b + S\_48 + S\_34b)

#### Notes:

- Utilities are ranked on the basis of revenue (see the top graph). Revenue for Sydney Water was \$2,640M and Hunter Water's revenue was \$312M.
- Refer also to Table 5 on page 116, Table 5A on page 120, graphs 24 and 27 on page 211 and figure 13 on page 115.
- For general notes see page 32.



Figure 4: Typical developer charge - water supply and sewerage

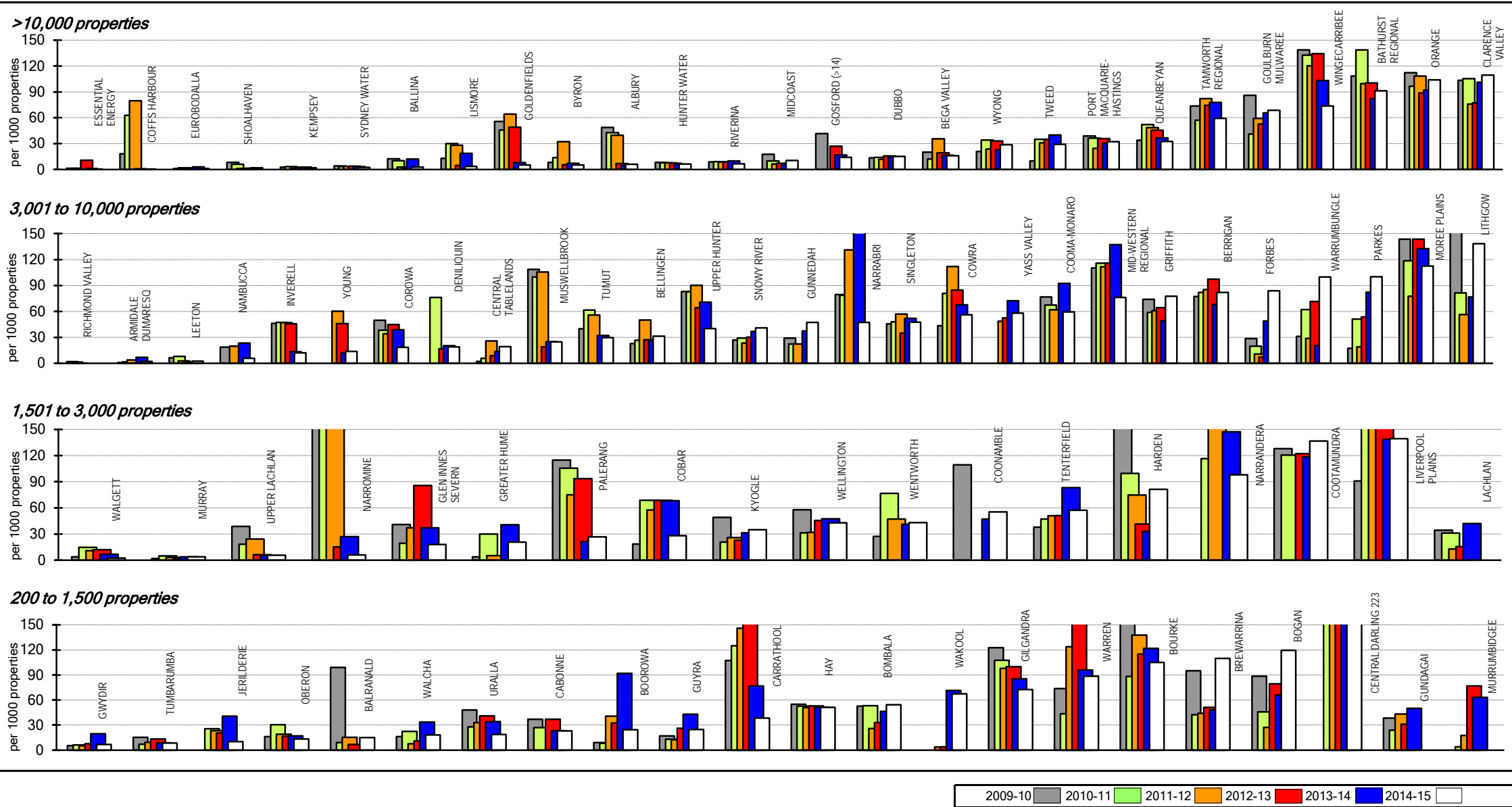


**Parameter:** Typical Water Supply Developer Charge (WB136) + Typical Sewerage Developer Charge (SB62)

**Notes:**

1. This figure shows ranked values of the 2015-16 typical developer charge for water supply and sewerage for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the typical developer charge for water supply and sewerage for the 24 LWUs shown ranges from \$22060 to \$2900. Results for the previous 5 years are also shown in Jan 2016\$.
2. The 2015-16 Statewide median typical developer charge for water supply and sewerage is \$11000 per Equivalent Tenement (ET). Refer also to Table 5 on page 116.
3. For general notes see page 32.

Figure 5: Total complaints - water supply and sewerage - C13

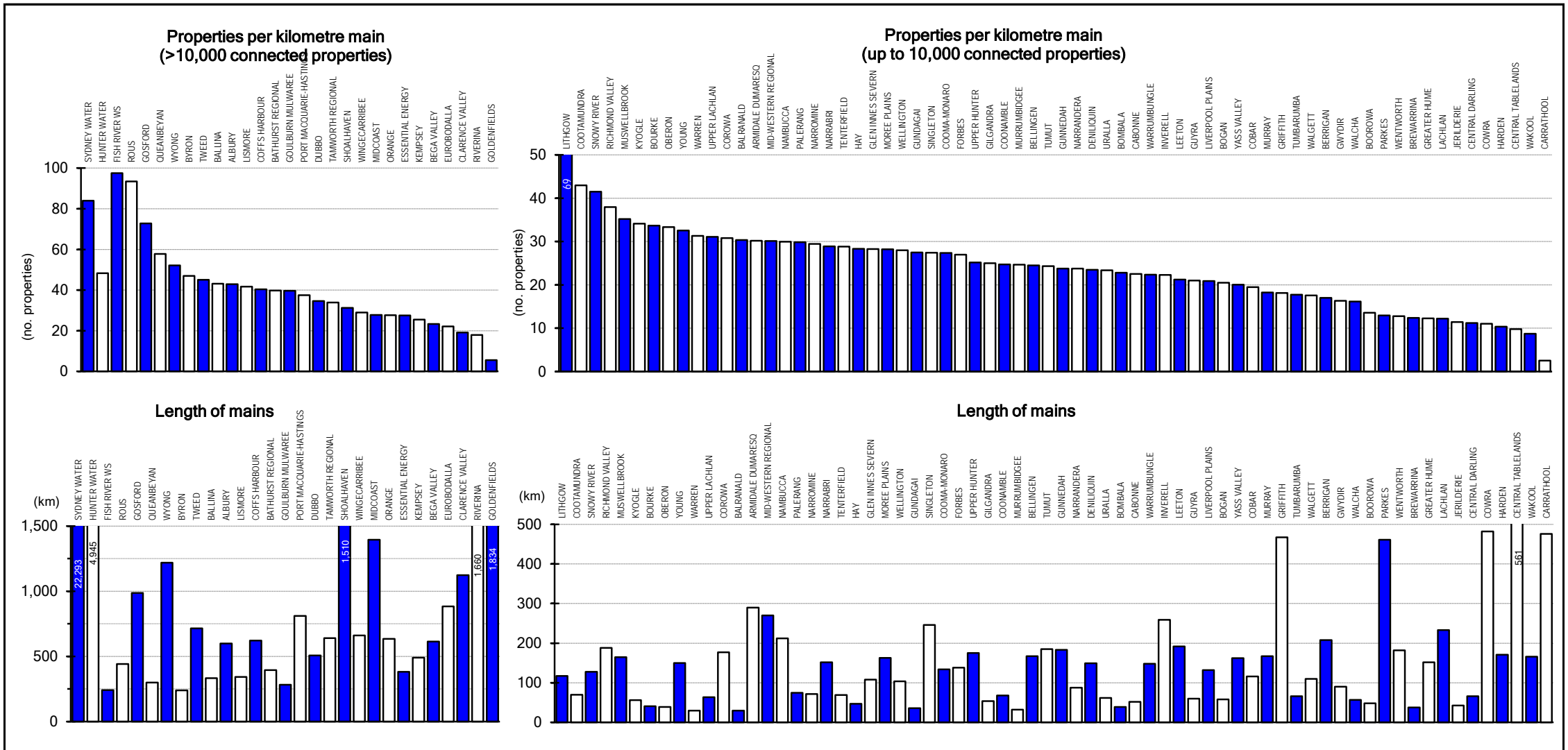


**Parameter:**  $\frac{[\text{No. of Water Complaints (WB102)} + \text{No. of Sewerage Complaints (SB40)}] \times 1000}{[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}}$

- Notes:**
1. This figure shows ranked values of the 2014-15 total number of water supply and sewerage complaints per 1000 connected properties for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the total water supply and sewerage complaints for the 26 LWUs shown ranges from nil to 138 per 1,000 connected properties.
  2. The Statewide median total number of water and sewerage complaints is 19 per 1,000 properties [National Median is 4 per 1,000 properties]. Refer also to figure 5 on page 115 and pages 183 and 198.
  3. For general notes see page 32.

## 8. WATER SUPPLY FIGURES

**Figure 6: Properties served per km of main, length of mains - water supply - A3**



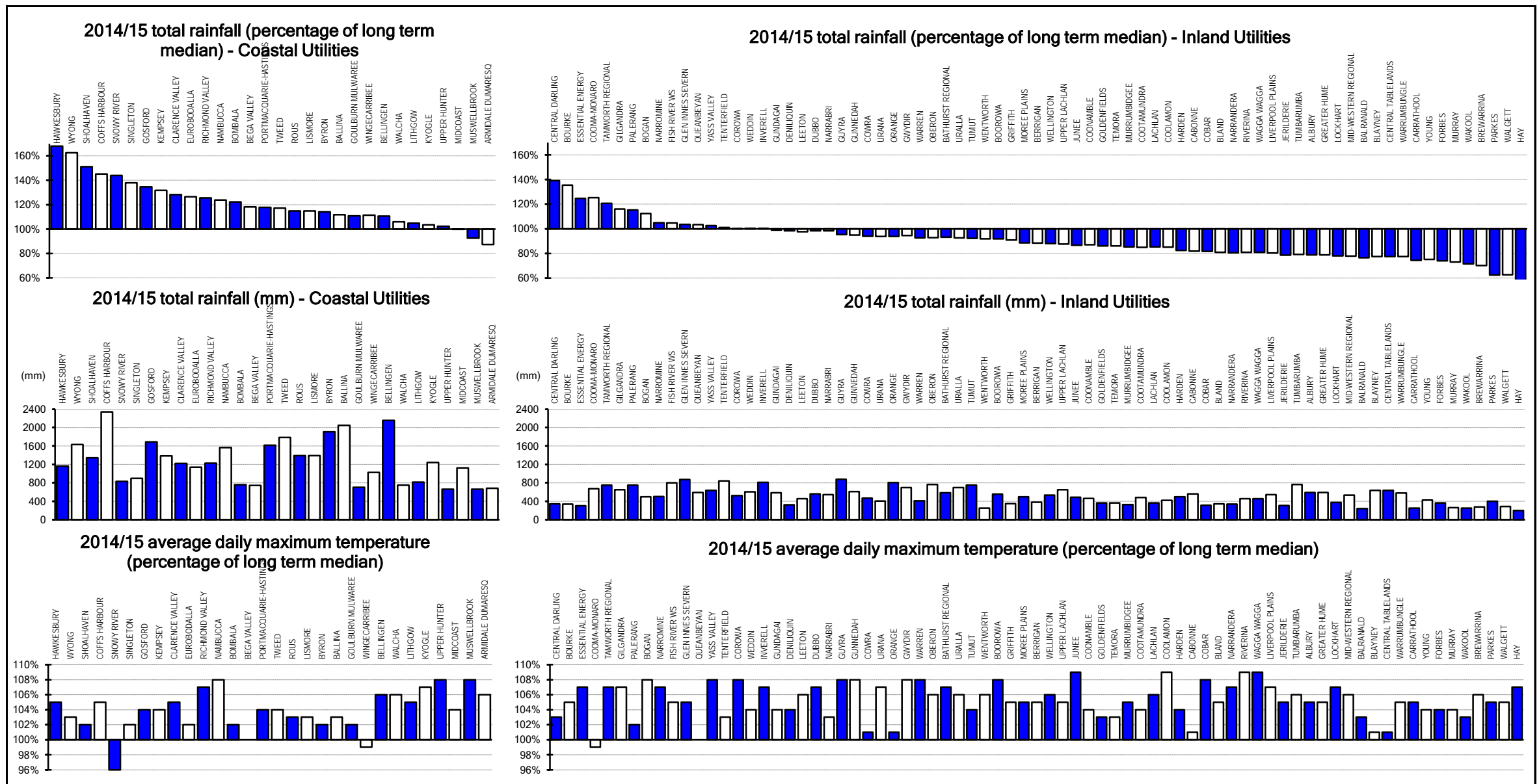
**Parameter:** 
$$\frac{\text{No. of residential assessments (WB32)} + \text{No. of non-residential assessments (WB33)} \times \text{No. of connected properties per assessment}}{\text{Length of headworks transfer mains (WB20a)} + \text{length of trunk mains (WB20)} + \text{length of reticulation mains (WB21)}}$$

**Parameter:** Length of headworks transfer mains (WB20a) + length of trunk mains (WB20) + length of reticulation mains (WB21)

**Notes:**

1. The top graph shows the ranked values of number of connected properties per km of water main for each Local Water Utility (LWU). Each bar represents one LWU. The bottom graph of this figure shows the total length of mains for the corresponding LWUs.
2. The Statewide median water supply connected properties per km of main is 31 [National Median is 34 per km of main]. Refer also to Table 9 on page 169 and graph 1 on page 205.
3. For general notes see page 32.

Figure 7: Rainfall, temperature - water supply



**Parameter:**  $[2014/15 \text{ total rainfall} \times 100] \div \text{Long term median annual rainfall}$

**Parameter:** 2014/15 total rainfall (mm)

**Parameter:**  $[2014/15 \text{ average daily maximum temperature} \times 100] \div \text{Long term median of daily maximum temperature}$

**Notes:**

1. Rainfall, temperature and medians are sourced from the Bureau of Meteorology. Long term medians are not available for some localities.
2. The total rainfall for the 2014/15 financial year and the average daily maximum temperature are only shown if weather stations returned complete records.
3. Weather stations are selected on the basis of proximity to a utility's major population centre and the length and reliability of records.
4. The statewide median annual rainfall was 116% of the long term median. However, the top graphs above show that the weighted medians for the coastal and inland utilities were 128% and 94% respectively.
5. For general notes see page 32.

Figure 8: Total water supplied - water supply - W11

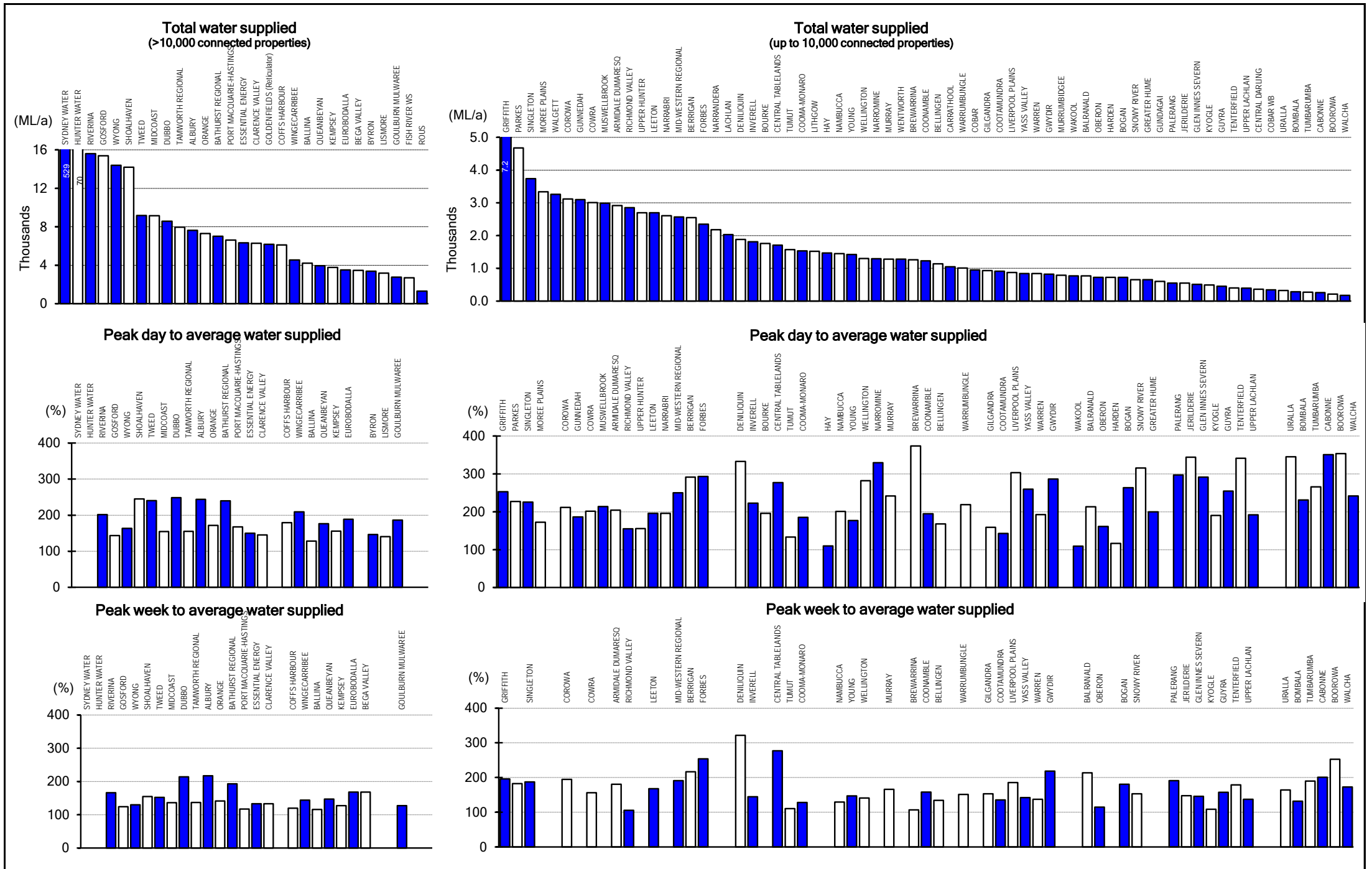
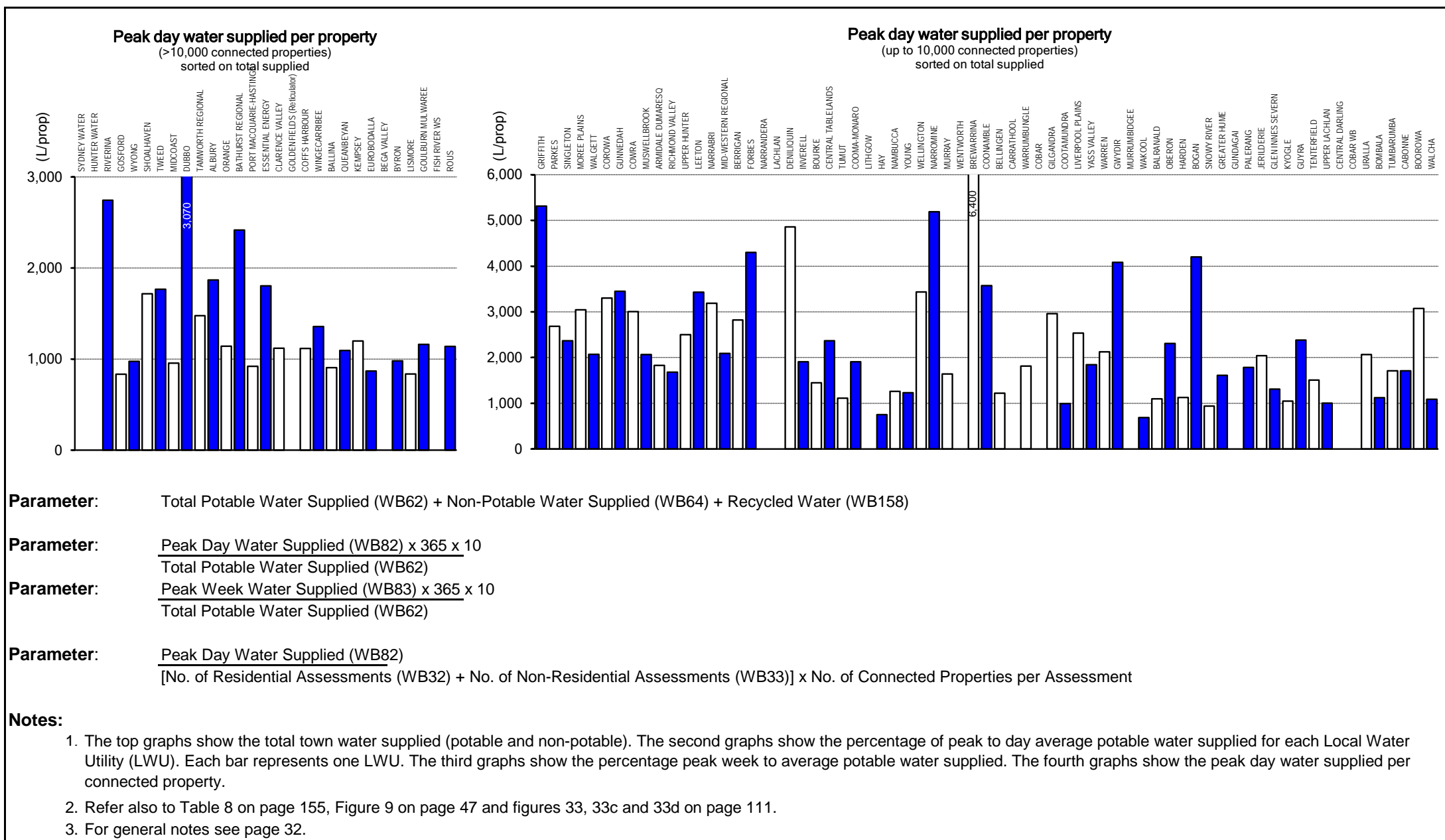
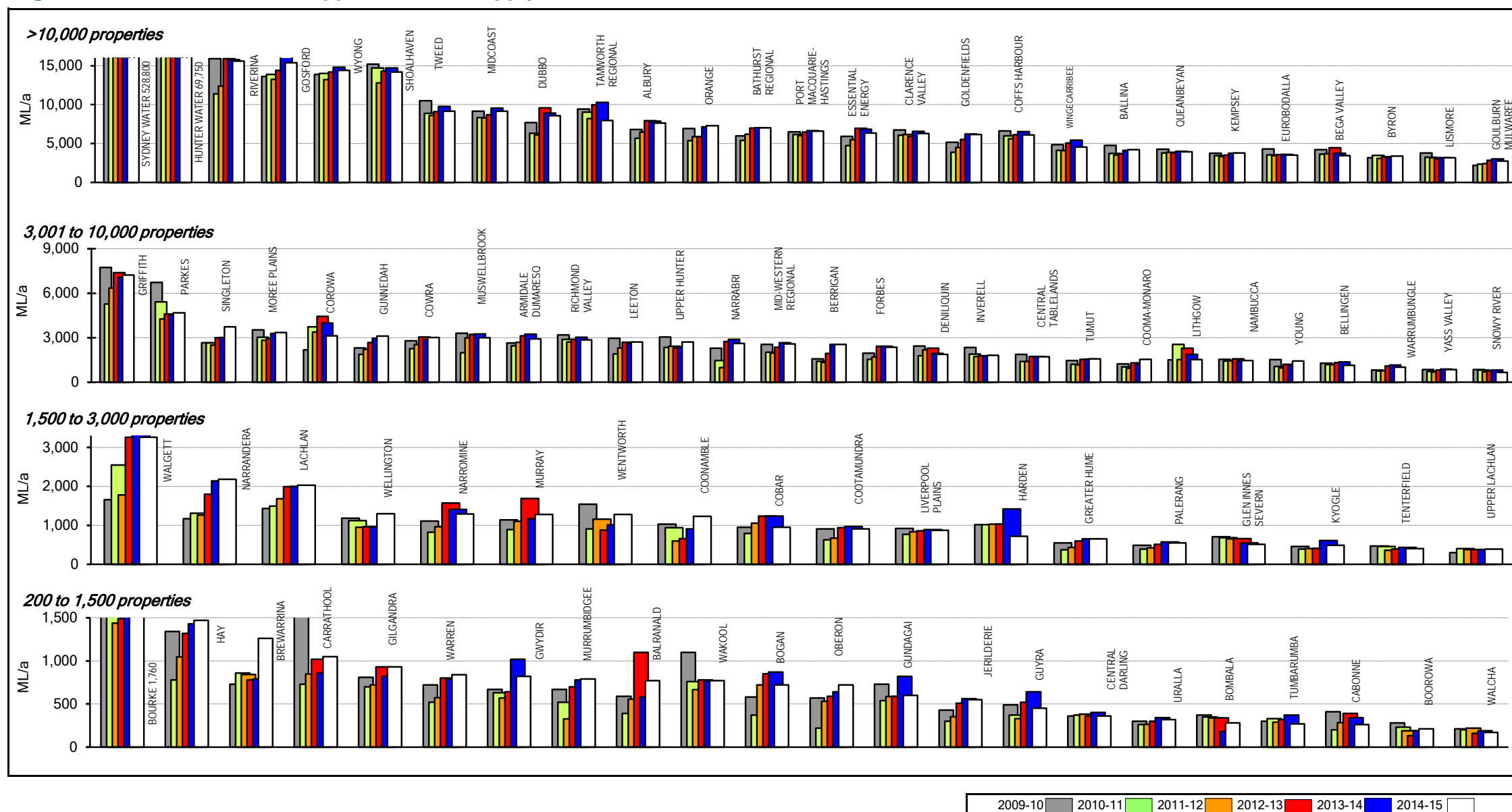


Figure 8: Total water supplied - water supply (continued)





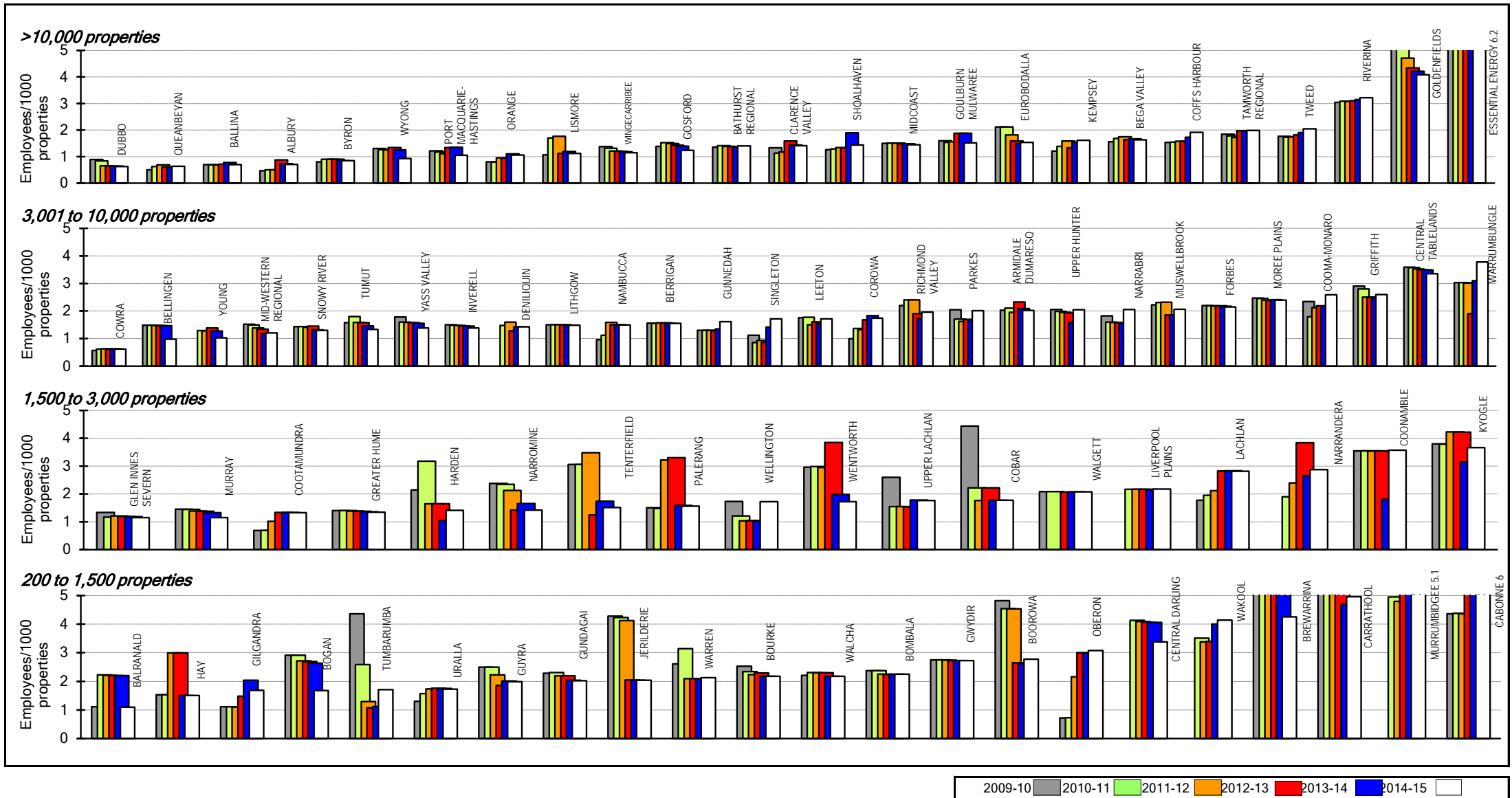
**Figure 9: Total urban water supplied - water supply - W11**

**Parameter:** Total Potable Water Supplied (WB62) + Non-Potable Water Supplied (WB64) + Recycled Water (WB158)

**Notes:**

1. This figure shows ranked values of the 2014-15 total urban water supplied for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the total urban water supplied for the 28 LWUs shown ranges from 7,220 to 650 ML/a. Results for the previous 5 years are also shown.
2. The Statewide median total urban water supplied is 7000 ML/a [National Median is 9060 ML/a]. Refer also to Table 5 on page 116 and Table 10 on page 172.
3. For general notes see page 32.

Figure 10: Employees per 1,000 properties - water supply



**Parameter:**  $\text{Equivalent Full-time Employees (WB120)} \times 1000$

$[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}$

**Notes:**

1. This figure shows ranked values of the 2014-15 number of water supply employees per 1000 properties for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the water supply employees per 1000 connected properties for the 28 LWUs shown ranges from 0.6 to 3.8. Results for the previous 5 years are also shown.
2. The Statewide median number of water supply employees is 1.4 per 1000 connected properties. Refer also to pages 21, 23, 27 and Table 9 on page 169.
3. For general notes see page 32.

Figure 11: Typical residential bill – water supply

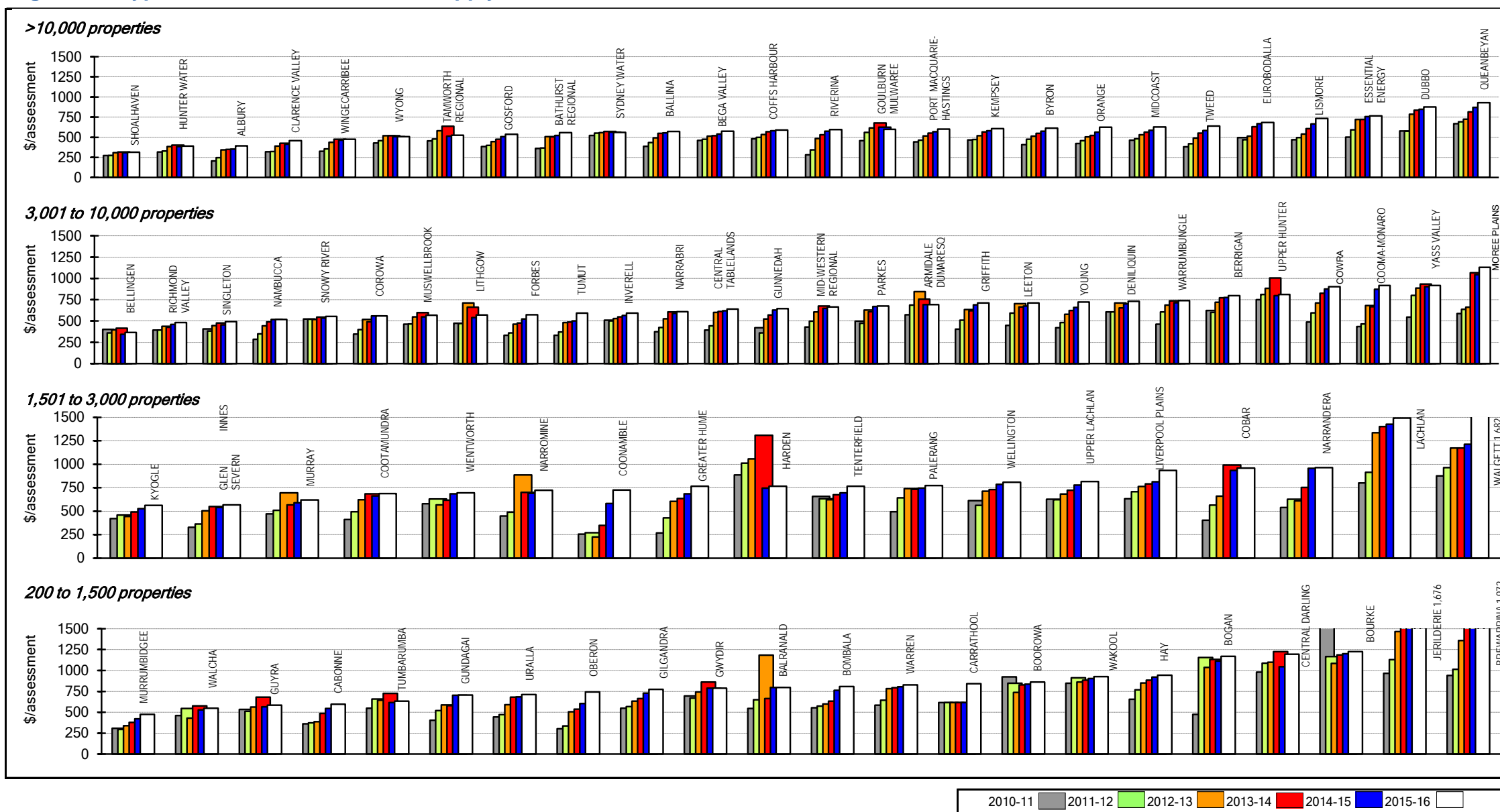
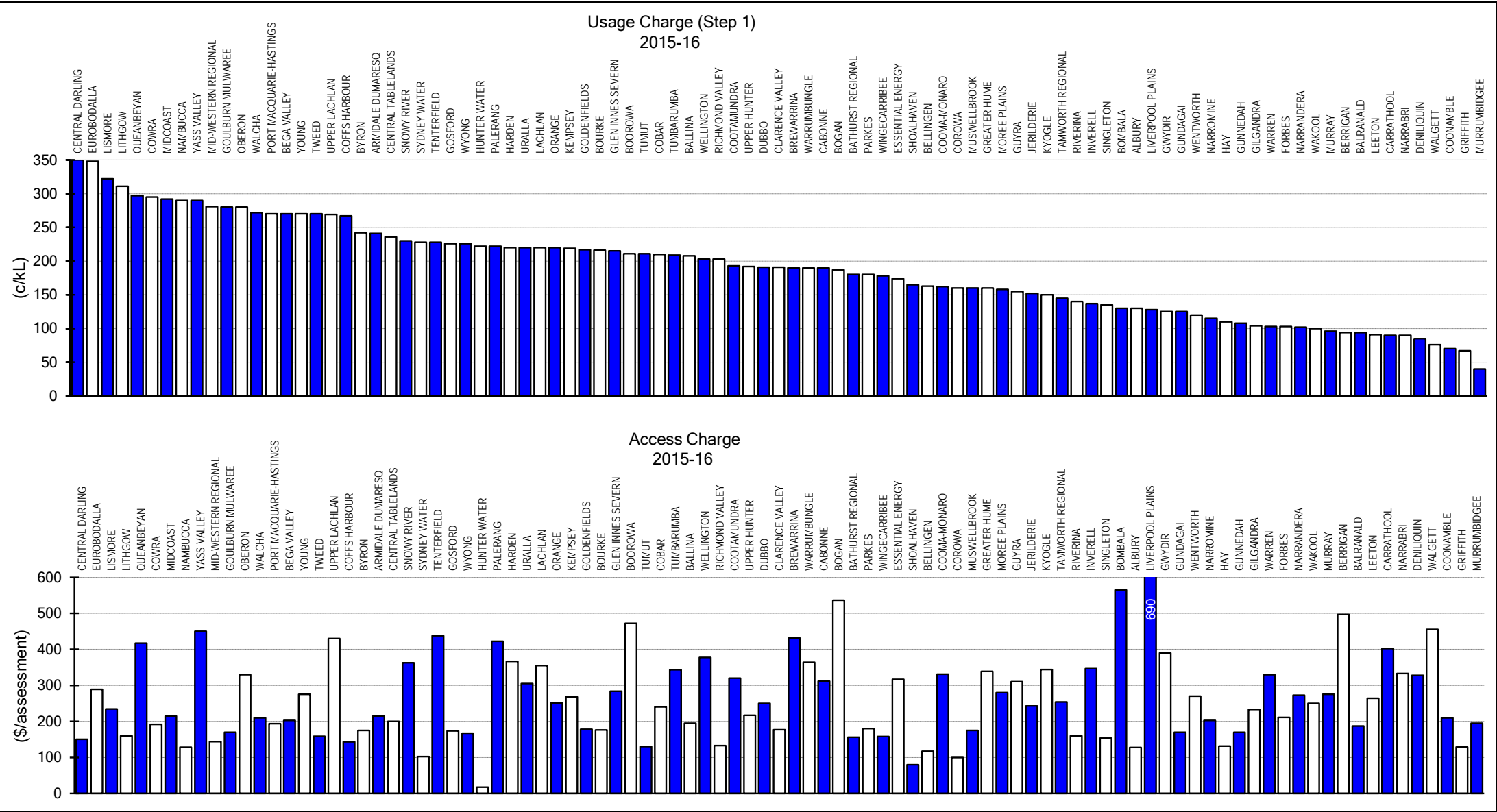
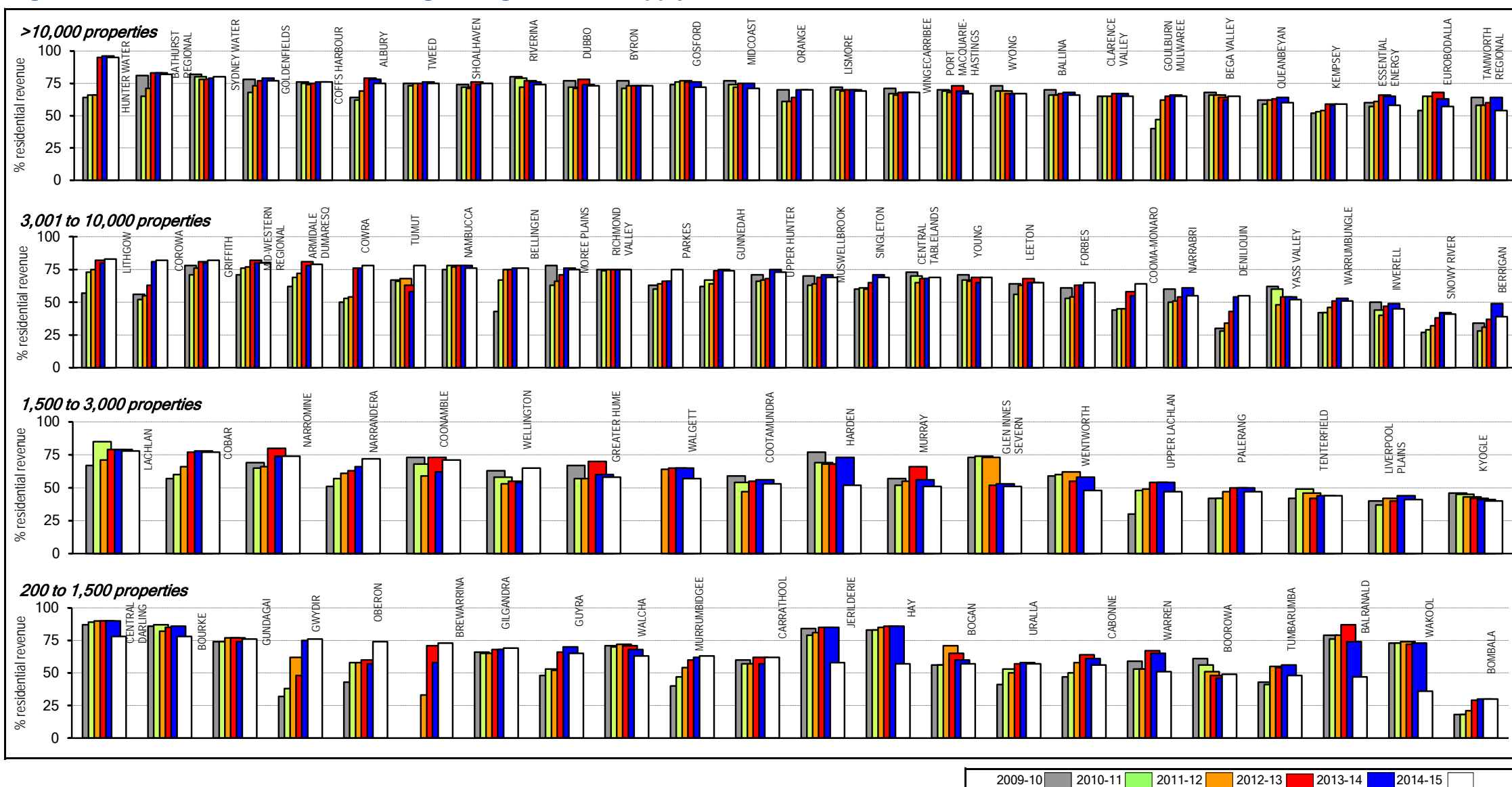


Figure 12: Residential usage charge [P1.3] and access charge [P1.2] - water supply



- Notes:**
1. ALL LWUs abolished their free water allowance for potable water supply by 2007. All LWUs now have domestic water metering.
  2. The first step residential water usage charge is shown above. Further information on water supply tariff structures is shown in Tables 6, 6A and 6B. Refer also to Table 6 on page 134 and graph 3 on page 206.
  3. The Statewide median water usage charge for the first step was 226 c/kL [National Median is 185 c/kL for 2014-15]. 20% of LWUs had a usage charge greater than 270 c/kL. 80% of LWUs had a usage charge greater than 160 c/kL. Refer also to figure 12 on page 111.
  4. For general notes see page 32. Refer also to page 13.

Figure 13: Residential revenue from usage charges - water supply - F4

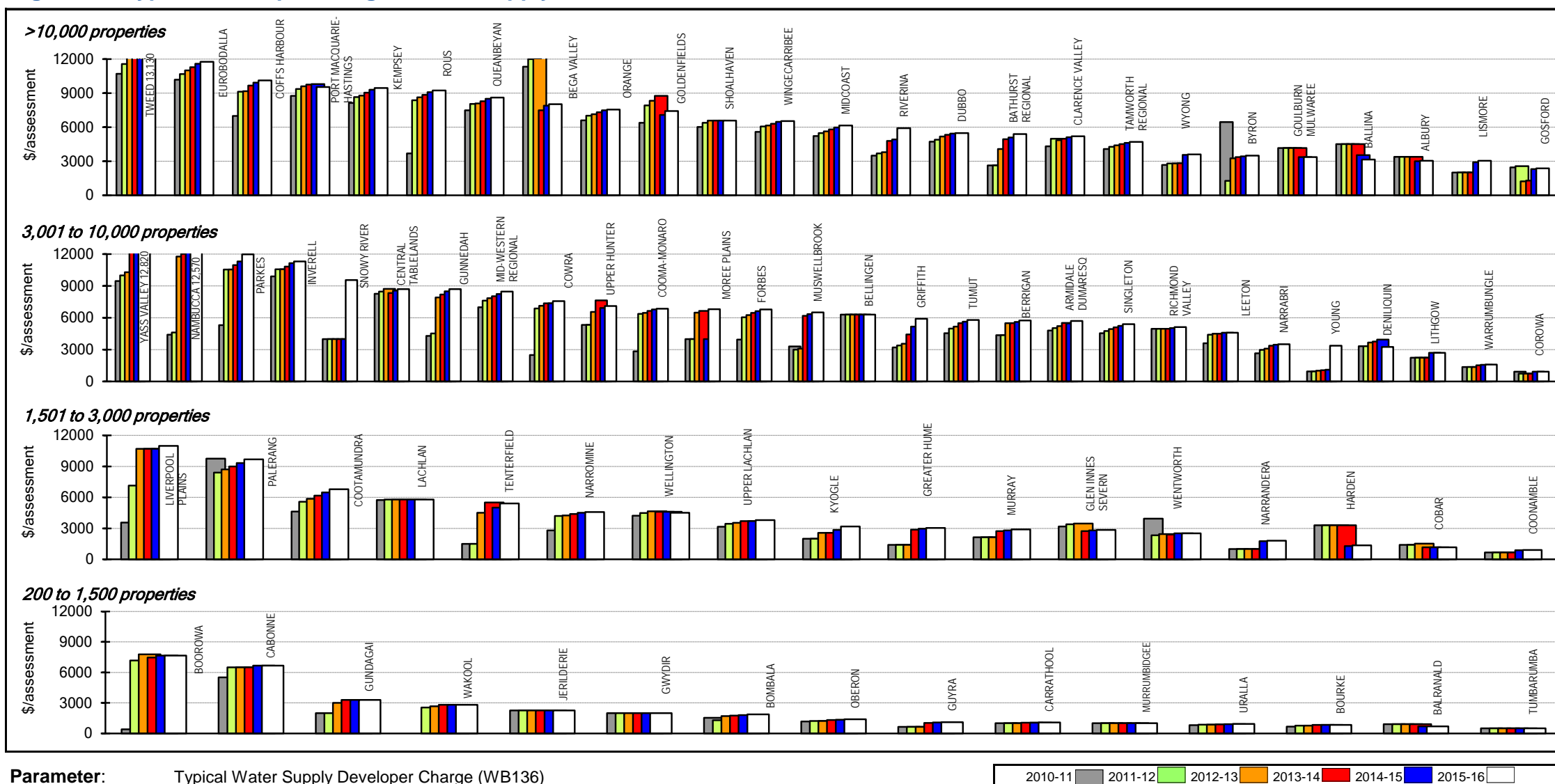


**Parameter:**  $\frac{\text{Revenue from residential user charges (W\_6b)} \times 100}{\text{Revenue from residential access charges (W\_6a)} + \text{Revenue from residential user charges (W\_6b)}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 residential revenue from usage charges for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the residential revenue from usage charges for the 28 LWUs shown ranges from 83 to 39 percent. Results for the previous 5 years are also shown.
2. The Statewide median residential revenue from water usage charges was 72%, which provides a strong pricing signal [National Median is 66%]. Refer also to page 24, Table 5 on page 116, Table 6 on page 134, Table 3 on page 108, graph 4 on page 206 and figure 16 on page 111. Refer also to page 5 of the 2014-15 Water Supply and Sewerage Performance Monitoring Report ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).
3. For general notes see page 32.

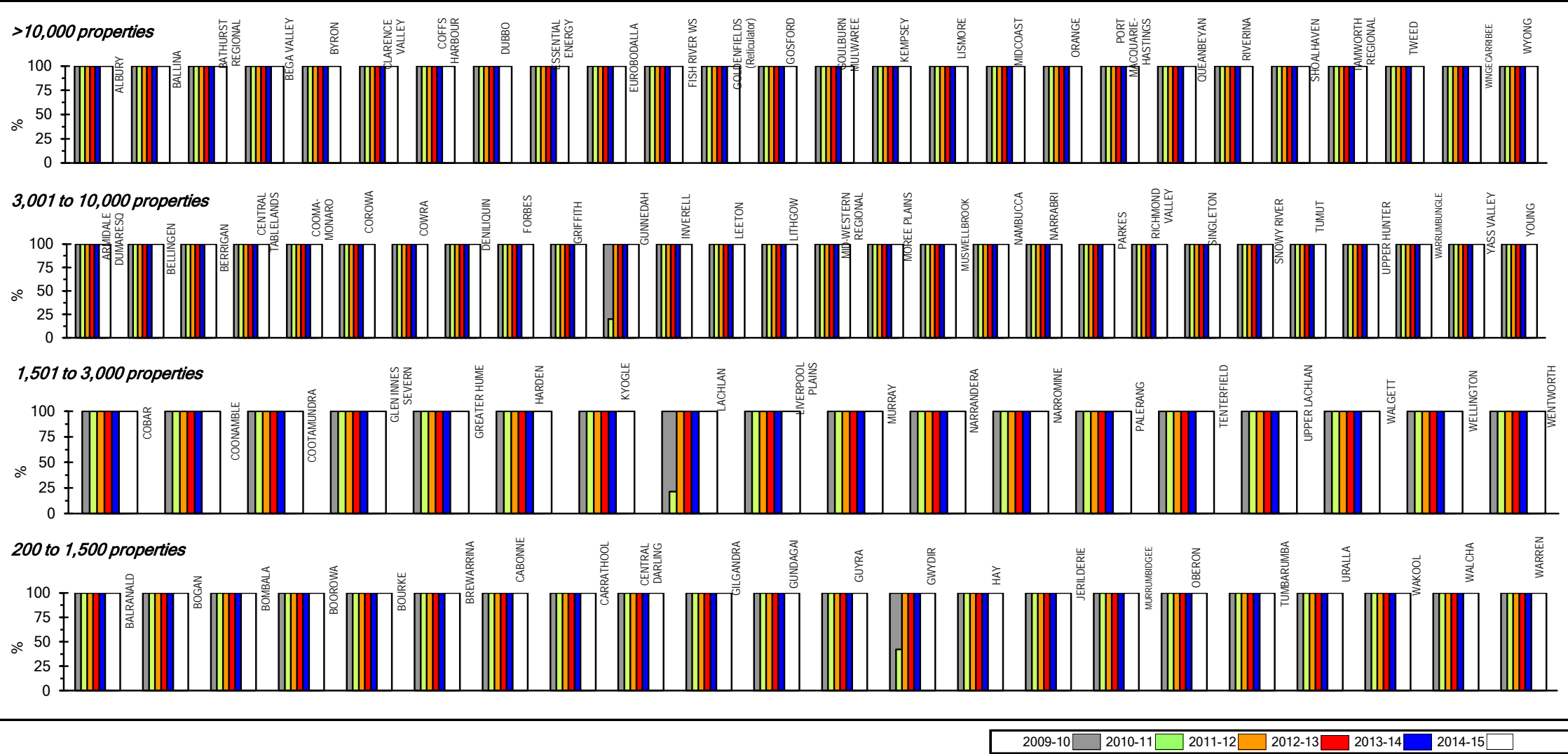
Figure 14: Typical developer charge – water supply

**Notes:**

1. This figure shows ranked values of the 2015-16 typical developer charge for water supply for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the typical developer charge for water supply for the 28 LWUs shown ranges from \$12800 to \$900. Results for the previous 5 years are also shown in Jan 2016\$.
2. The 2015-16 Statewide median typical developer charge for water supply is \$5,900 per equivalent tenement (ET), which is 36% of the median current replacement cost of water supply system assets of \$16,400 per assessment. Refer also to Table 6 on page 134.
3. 85 LWUs levied water supply developer charges.
4. 83% of LWUs have an appropriate water supply Development Servicing Plan (DSP) with commercial developer charges. This includes the following 12 utilities which have received an exemption from needing to levy commercial water supply developer charges due to their low growth of under 5 lots/a - Bogan, Boorowra, Bourke, Brewarrina, Central Darling, Coonamble, Essential Energy, Gilgandra, Hay, Kyogle, Tumbarumba and Warren.
5. For general notes see page 32.



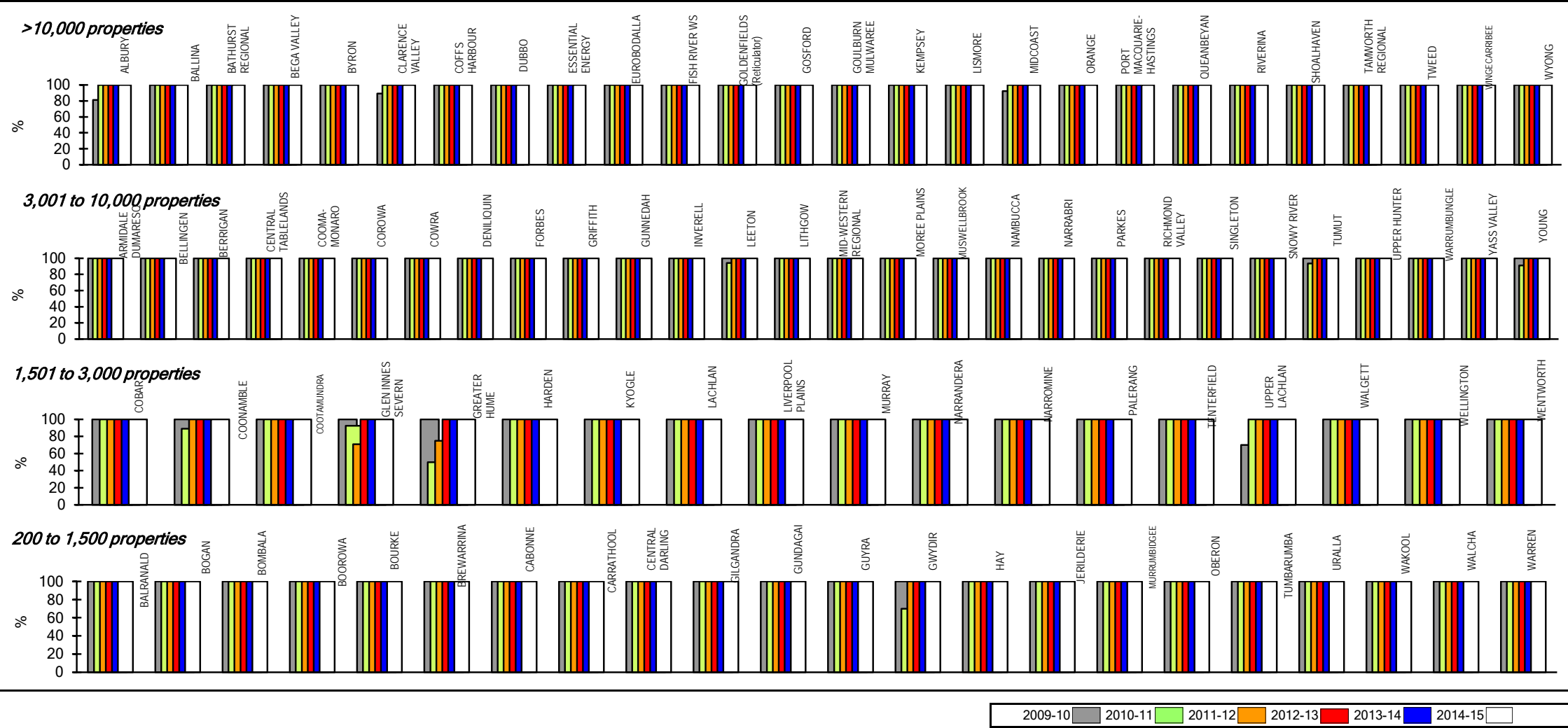
Figure 15: Physical water quality compliance - water supply



**Parameter:** Percentage of distribution system water samples complying with physical criteria of the NHMRC/NRMMC Australian Drinking Water Guidelines 2011.

- Notes:**
1. This figure shows ranked values of the 2014-15 distribution system compliance with the NHRMC/NRMMC Australian Drinking Water Guidelines 2011 for physical water quality for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the physical water quality compliance for the 28 LWUs shown are all 100%. Results for the previous 5 years are also shown.
  2. For an LWU to comply with the 2011 Australian Drinking Water Guidelines for physical water quality (aesthetic), the required number of samples must be tested (refer to page 235) and the mean of results must not exceed the guideline value for each characteristic. The result for such an LWU is shown as '100%' in this figure. Non-potable water supplies are excluded.
  3. 98.3% of the 4,600 samples tested in 2014-15 achieved 100% compliance with these guidelines. 100% of LWUs complied with the guidelines in 2014-15.
  4. For LWUs with more than one water treatment works, the reported compliance has been pro-rated on the basis of the number of samples tested at each treatment works. Appendix D1 on page 280 provides the 2014-15 results for each treatment works.
  5. The Statewide median physical water quality compliance is 100%. Refer also to Table 12 on page 183.
  6. For general notes see page 32.

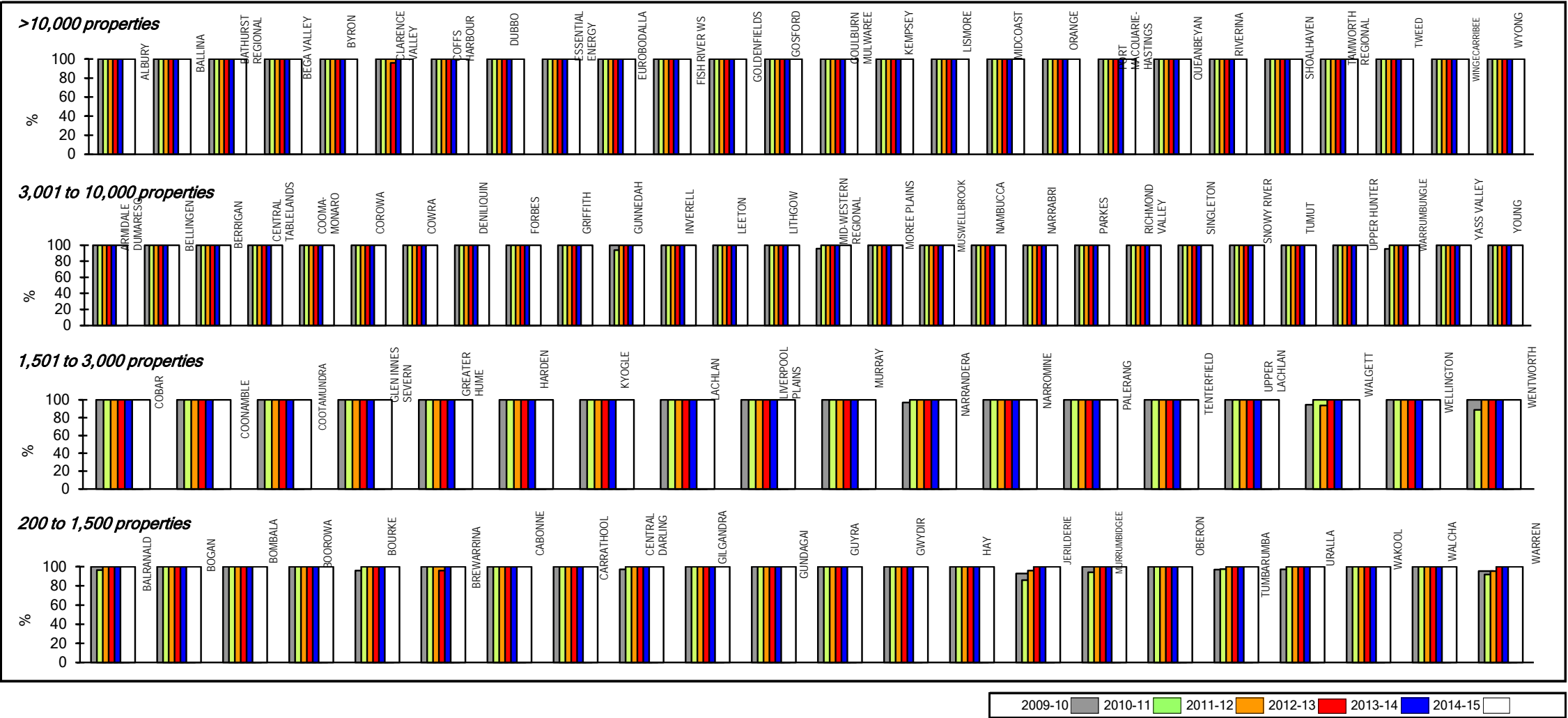
Figure 16: Chemical water quality compliance - water supply



**Parameter:** Percentage of distribution system water samples complying with chemical criteria of the 2011 NHMRC/NRMMC Australian Drinking Water Guidelines.

- Notes:**
1. This figure shows ranked values of the 2014-15 distribution system compliance with the 2011 NHRMC/NRMMC Australian Drinking Water Guidelines for chemical water quality for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the chemical water quality compliance for the 28 LWUs shown are all 100%. Results for the previous 5 years are also shown.
  2. 99.9% of the 4,800 samples tested in 2014-15 complied with the 2011 Guidelines. 100% of the LWUs complied with the Guidelines in 2014-15.
  3. For a LWU to comply with the 2011 Australian Drinking Water Guidelines for chemical water quality (health related), the required number of samples must be tested (refer to page 235) and at least the 95th percentile of results must not exceed the guideline value for each chemical. The result for such a LWU is shown as '100%' in this figure. Non-potable water supplies are excluded. For LWUs with more than one water treatment works, the reported compliance has been pro-rated on the basis of the number of samples tested at each treatment works. Appendix D1 on page 280 provides the 2014-15 results for each treatment works. Refer also to Table 5 on page 116 and Table 12 on page 183.
  4. The Statewide median chemical water quality compliance is 100%.
  5. For 2012-13, 2013-14 and 2014-15, the public drinking water supply for 99.9% of the urban population in regional NSW complied with 2011 ADWG for both microbiological and chemical water quality.
  6. For general notes see page 32.

Figure 17: Microbiological water quality compliance - water supply

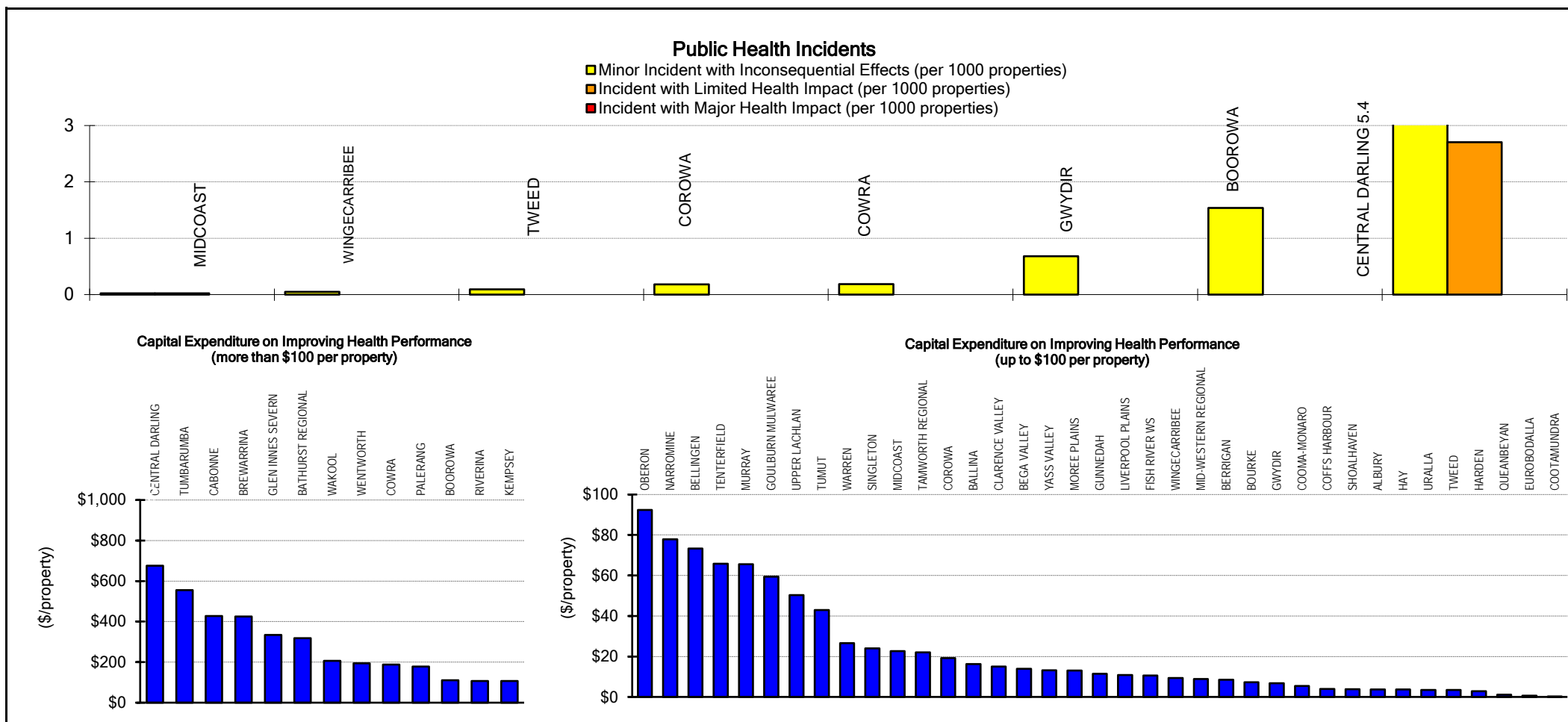


**Parameter:** Percentage of distribution system water samples complying with E. coli criteria of the 2011 NHMRC/NRMMC Australian Drinking Water Guidelines

**Notes:**

1. This figure shows ranked values of the 2014-15 distribution system compliance with the 2011 NHRMC/NRMMC Australian Drinking Water Guidelines for E. coli for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the microbiological water quality compliance for the 28 LWUs shown are all 100%. Results for the previous 5 years are also shown.
2. For a LWU to comply with the 2011 Australian Drinking Water Guidelines for microbiological water quality, the required number of samples must be tested (refer to page 235) and at least 98% of the samples must contain no E.coli. The result for such a LWU is shown as '100%' in this figure. Non-potable water supplies are excluded. 99.9% of the 19,400 samples tested in 2014-15 contained no E. coli. 100% of the LWUs complied with the 2011 Guidelines for E. coli in 2014-15. Refer also to page 24.
3. For LWUs with more than one water treatment works, the reported compliance has been pro-rated on the basis of the number of samples tested at each treatment works. Appendix D1 on page 280 provides the 2014-15 results for each treatment works.
4. The Statewide median microbiological water quality compliance is 100%. Refer also to Table 5 on page 116, Table 12 on page 183 and graph 8 on page 207.
5. For 2012-13, 2013-14 and 2014-15, the public drinking water supply for 99.9% of the urban population in regional NSW complied with 2011 ADWG for both microbiological and chemical water quality.
6. For general notes see page 32.

Figure 18: Public health incidents, capital investment - water supply

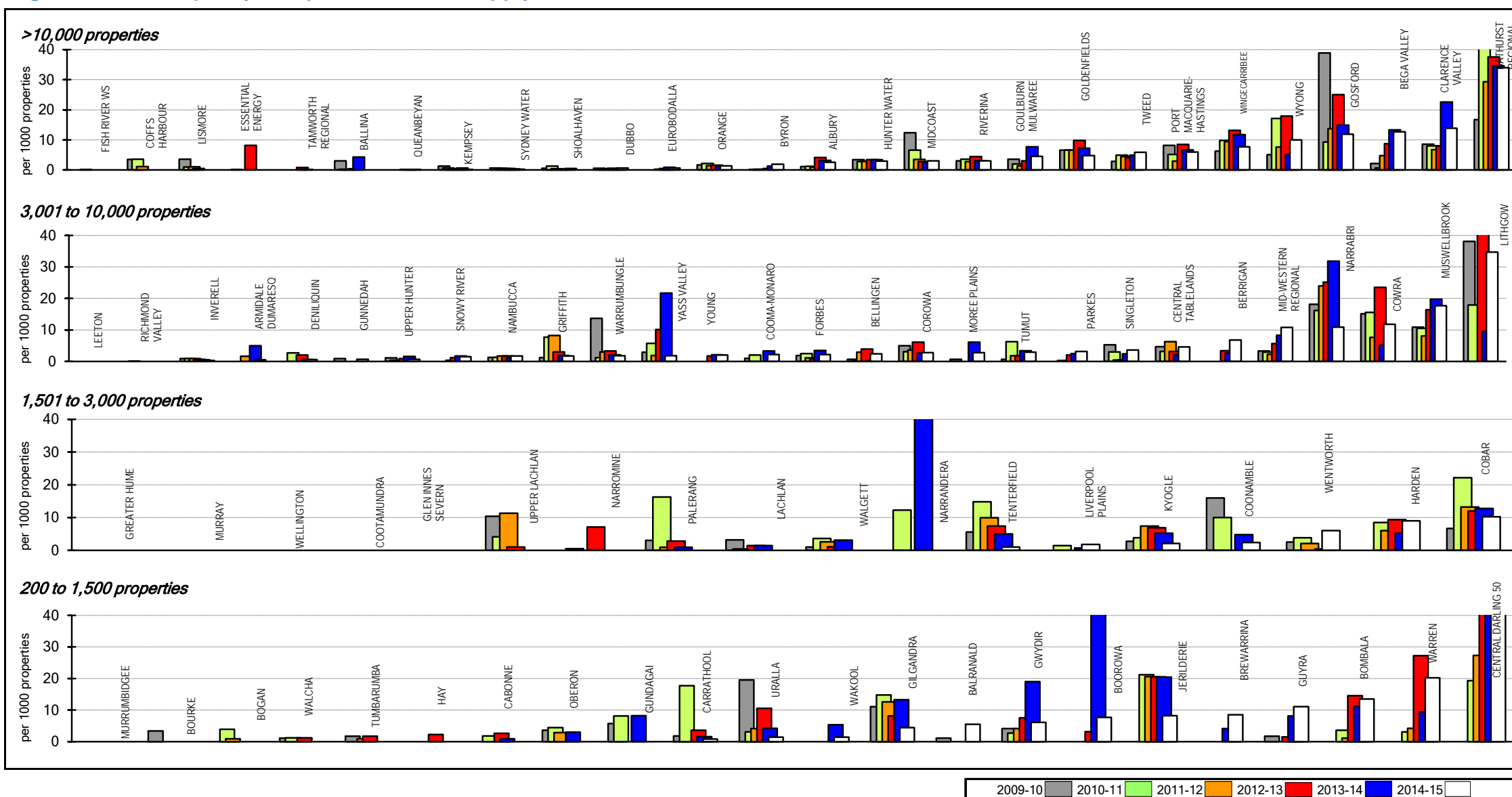


|            |  |
|------------|--|
| Parameter: | Total No. of Minor Incidents with Inconsequential Effects (WB115)  |
| Parameter: | [No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment |
| Parameter: | Total No. of Minor Incidents with Limited Health Impacts (WB116)   |
| Parameter: | [No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment |
| Parameter: | Total No. of Major Incidents with Major Health Impacts (WB117)   |
| Parameter: | [No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment |
| Parameter: | Capital Expenditure on Improving Health Performance (\$) x (WB119)   |
| Parameter: | [No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment |

**Note:**

- 8 Utilities are shown in the figure above, while 87 utilities reported zero public health incidents.
- For general notes see page 32.

Figure 19: Water quality complaints - water supply - C9

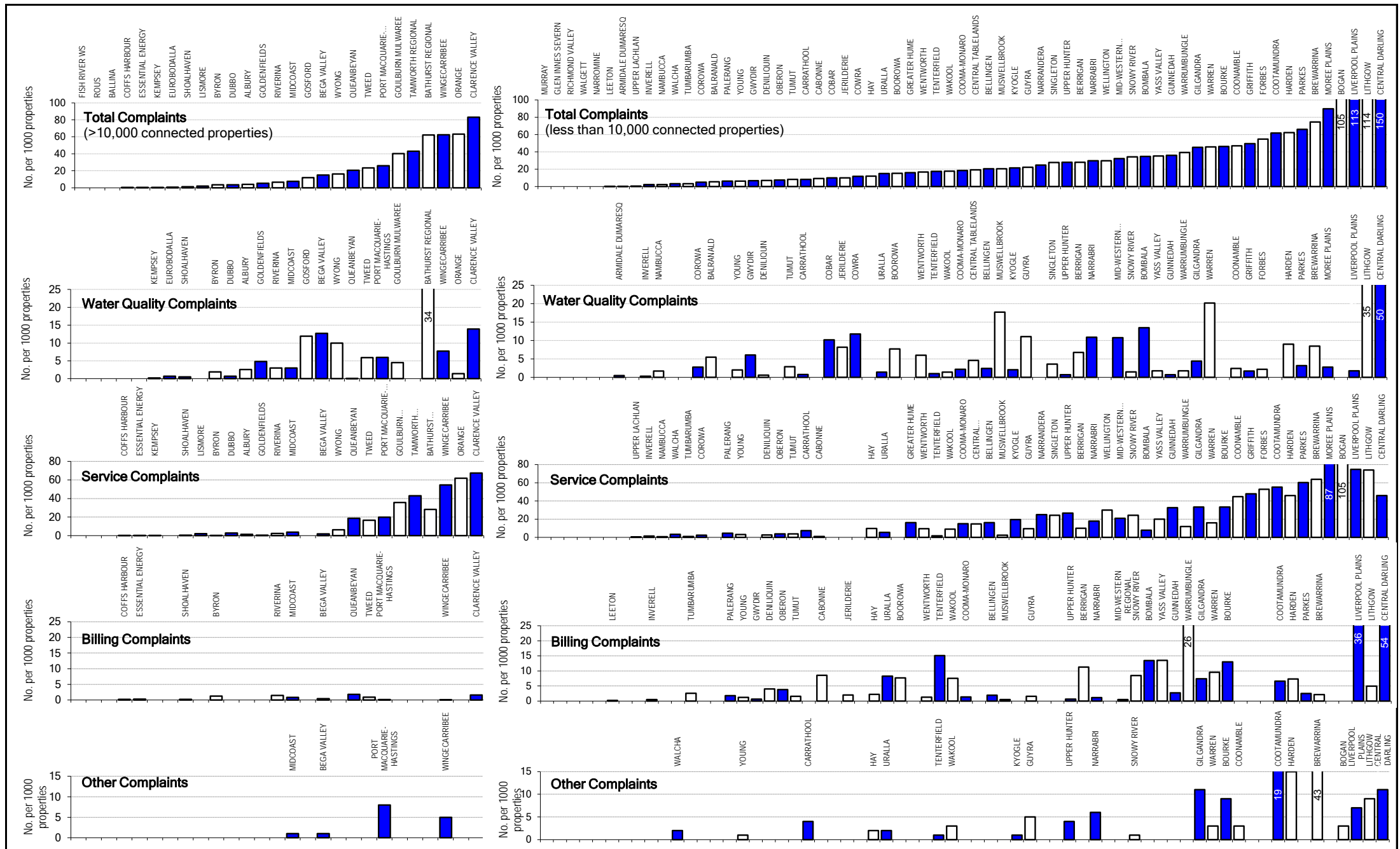


**Parameter:**  $\frac{\text{No. of Water Quality Complaints (WB101)} \times 1000}{[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 number of water quality complaints per 1000 connected properties for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the water quality complaints for the 26 LWUs shown ranges from nil to 35 per 1000 connected properties.
2. The Statewide median number of water quality complaints is 3 per 1000 properties [National Median is 2 per 1,000 properties]. Refer also to Table 5 on page 116, graph 9 on page 207 and figure 25 on page 112.
3. For general notes see page 32.

Figure 20: Complaints (per 1,000 properties) - water supply - C9, C10



Parameter:

Total No. of Complaints [(WB96)+(WB99)+(WB100)+(WB101)] x 1000

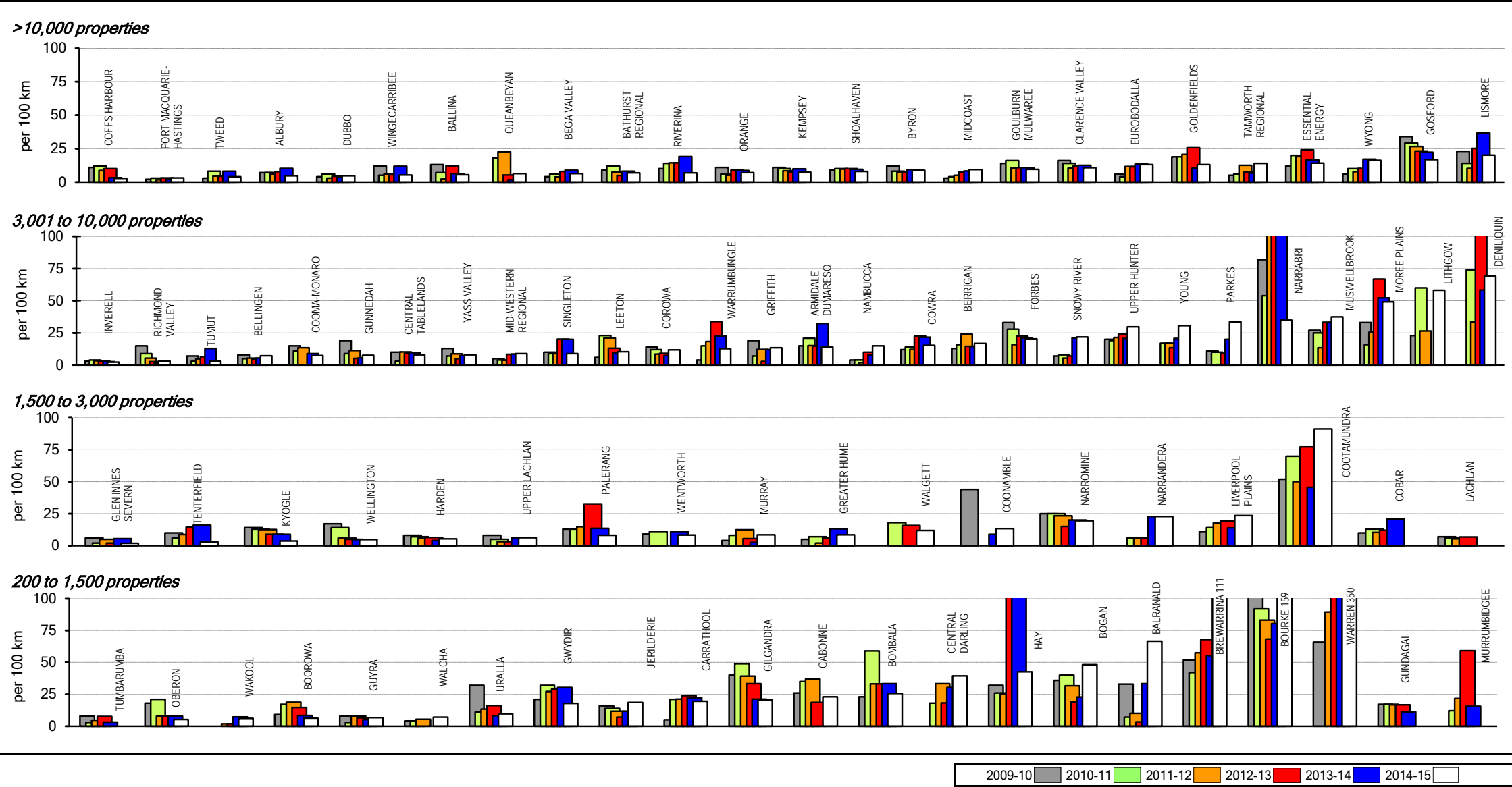
Note:

[No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment

1. For general notes see page 32. Refer also to Table 5 on page 116, Table 12 on page 183, figures 25 and 26 on page 112, figure 21 on page 114 and figure 5 on page 115.



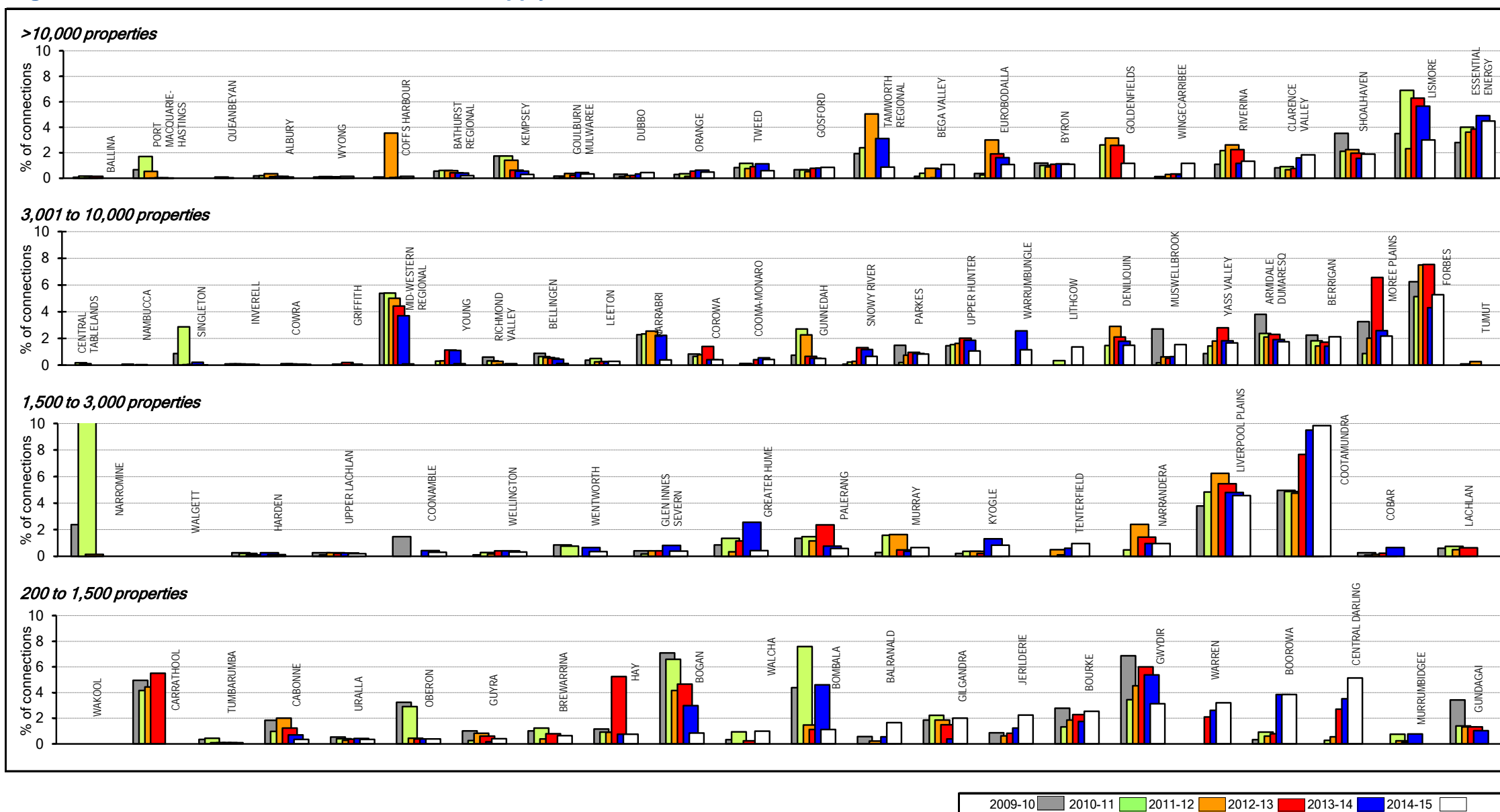
Figure 21: Number of water main breaks - water supply - A8



Parameter: No. of Pipeline Breaks (WB104) x 100  
Length of Distribution and Trunk Mains (WB22)

- Notes:
1. This figure shows ranked values of the 2014-15 water supply main breaks for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the number of main breaks for the 28 LWUs shown ranges from 2.3 to 69 per 100km of water mains. Results for the previous 5 years are also shown.
  2. The Statewide median number of water supply main breaks is 9 per 100km of water main [National Median is 13 per 100km of water main]. This has remained much lower than all the other states and capital city utilities, indicating good water main asset condition (graph 10 on page 207 of Appendix A and figure 30 on page 112). Refer also to Table 5 on page 116 and Table 10 on page 172.
  3. For general notes see page 32.

Figure 22: Service connection failures - water supply



Parameter:

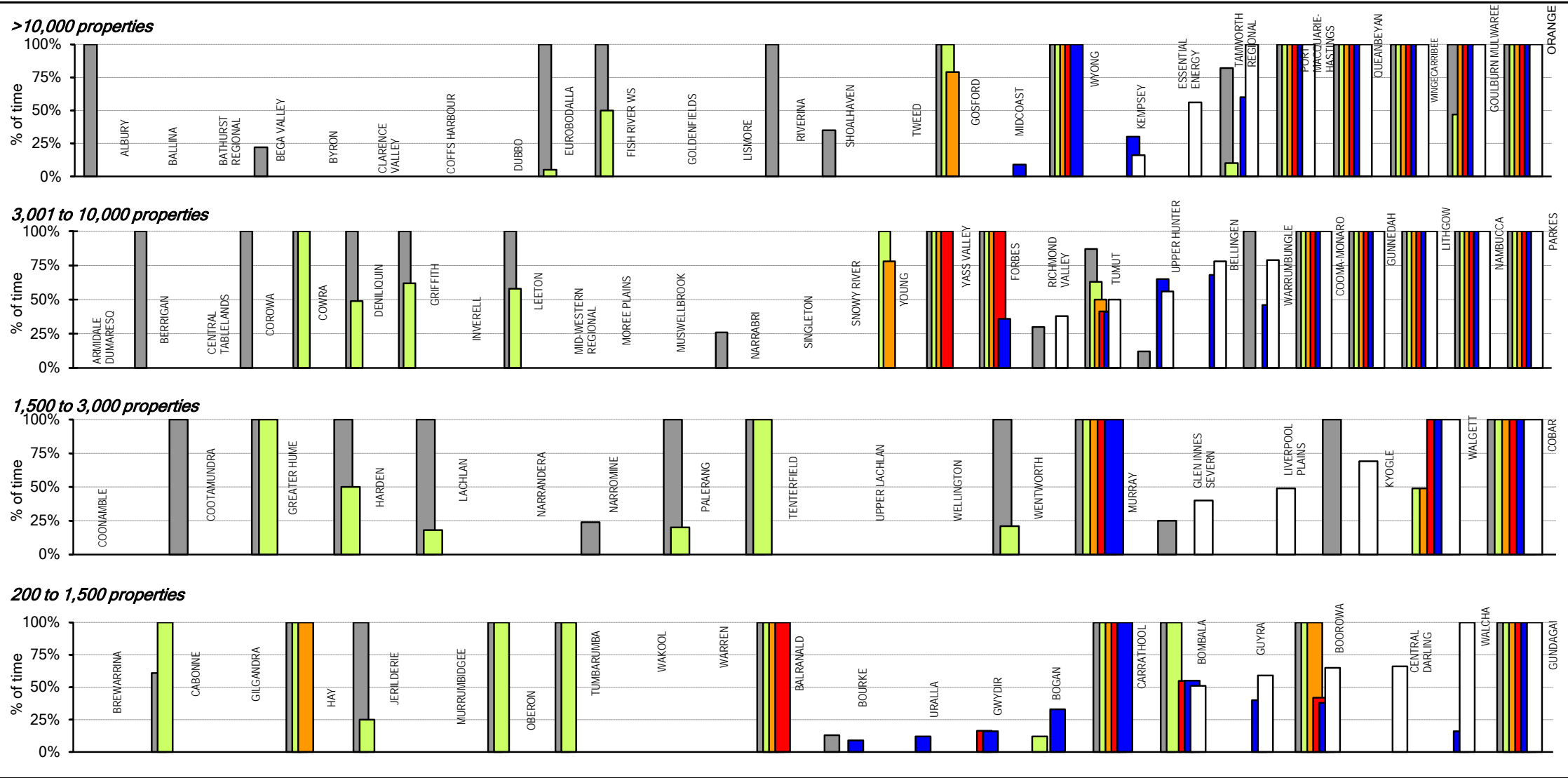
No. of Service Connection Failures (WB105) x 100

[No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment

Notes:

1. This figure shows ranked values of the 2014-15 water supply service connection failures for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the number of service connection failures for the 26 LWUs shown ranges from nil to 5%. The 1 LWU on the right did not report this indicator for 2014-15. Results for the previous 5 years are also shown.
2. Refer also to Table 10 on page 172 and columns 48 to 59 of Table 5C on page 126.
3. For general notes see page 32.

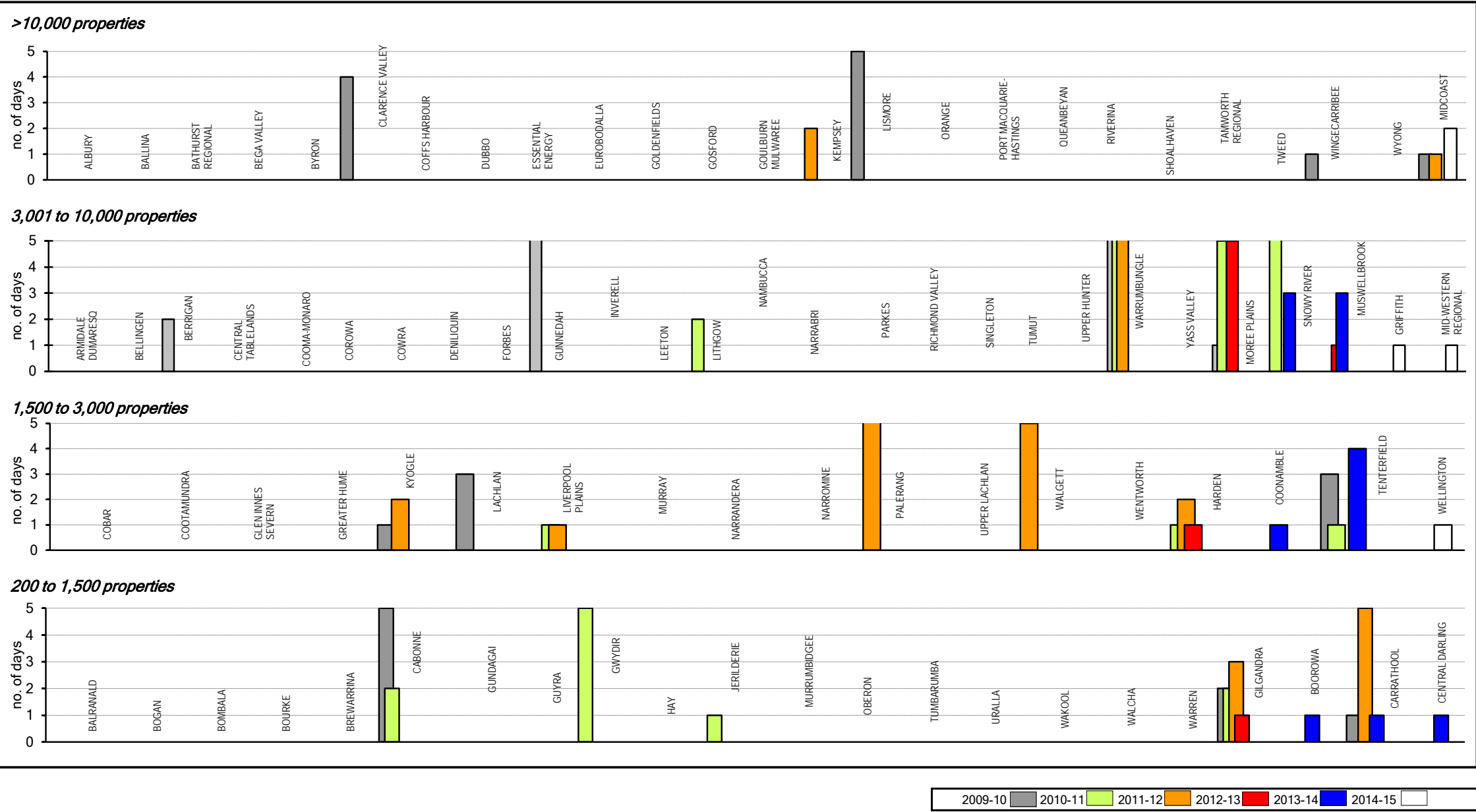
Figure 23: Drought water restrictions - water supply



Parameter: No. of Days of Water Restrictions Due to Drought (WB95) x 100  
365 Days

- Notes:
1. This figure shows ranked values of the 2014-15 drought water restrictions due to drought for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), 10 of the 28 reporting LWUs reported restrictions ranging from 38% of the time to 100% of the time. 18 LWUs reported no drought water restrictions. Results for the previous 5 years are also shown.
  2. 30% of the LWUs needed to apply drought water restrictions in 2014-15.
  3. Refer also to Table 12 on page 183 and to page 3 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).
  4. For general notes see page 32.

Figure 24: Chlorination system malfunction - water supply

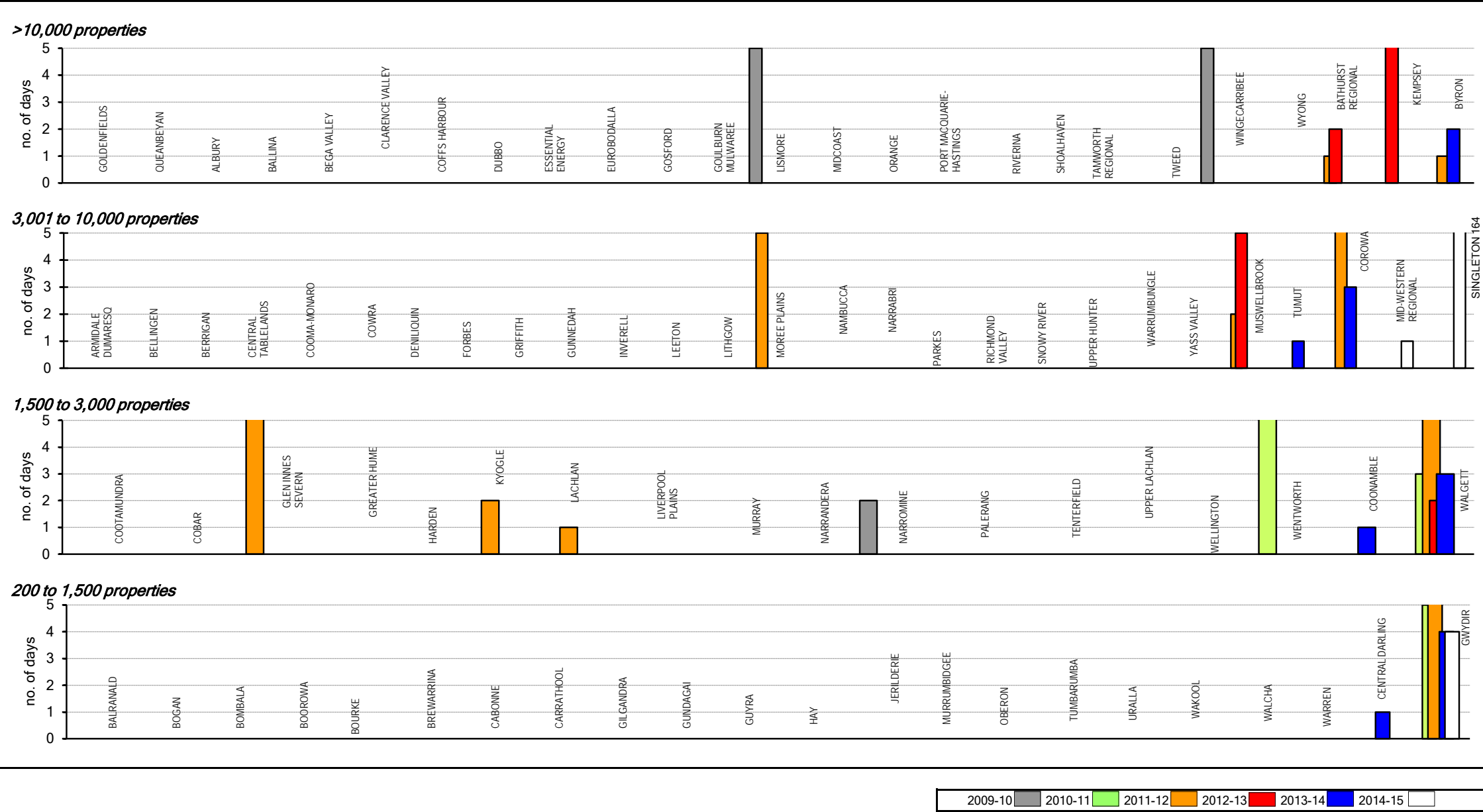


Parameter: Number of Days Chlorination System failed to Operate (WB44)

Notes:

1. The figure shows the 2014-15 ranked number of days a chlorination system for potable water did not operate for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the number of days the chlorination system did not operate for the 27 LWUs shown ranges from nil to 1 days. Results for the previous 5 years are also shown.
2. For LWUs with more than one chlorination system, the weighted average (based on capacity) of days was used. Refer also to Appendix D1 on page 280.
3. For general notes see page 32.

Figure 25: Treatment works malfunction - water supply



Parameter: Number of Days of major Malfunction of Treatment Processes (WB45)

Notes:

1. The figure shows the 2014-15 ranked number of days of treatment works malfunction for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the number of days of treatment works malfunction for the 27 LWUs shown ranges from nil to 164 days. Results for the previous 5 years are also shown.
2. For LWUs with more than one treatment works, the weighted average days of malfunction (based on treatment works capacity) was used. Refer also to Appendix D1 on page 280.
3. For general notes see page 32.

Figure 26: Average annual residential water supplied - water supply - W12

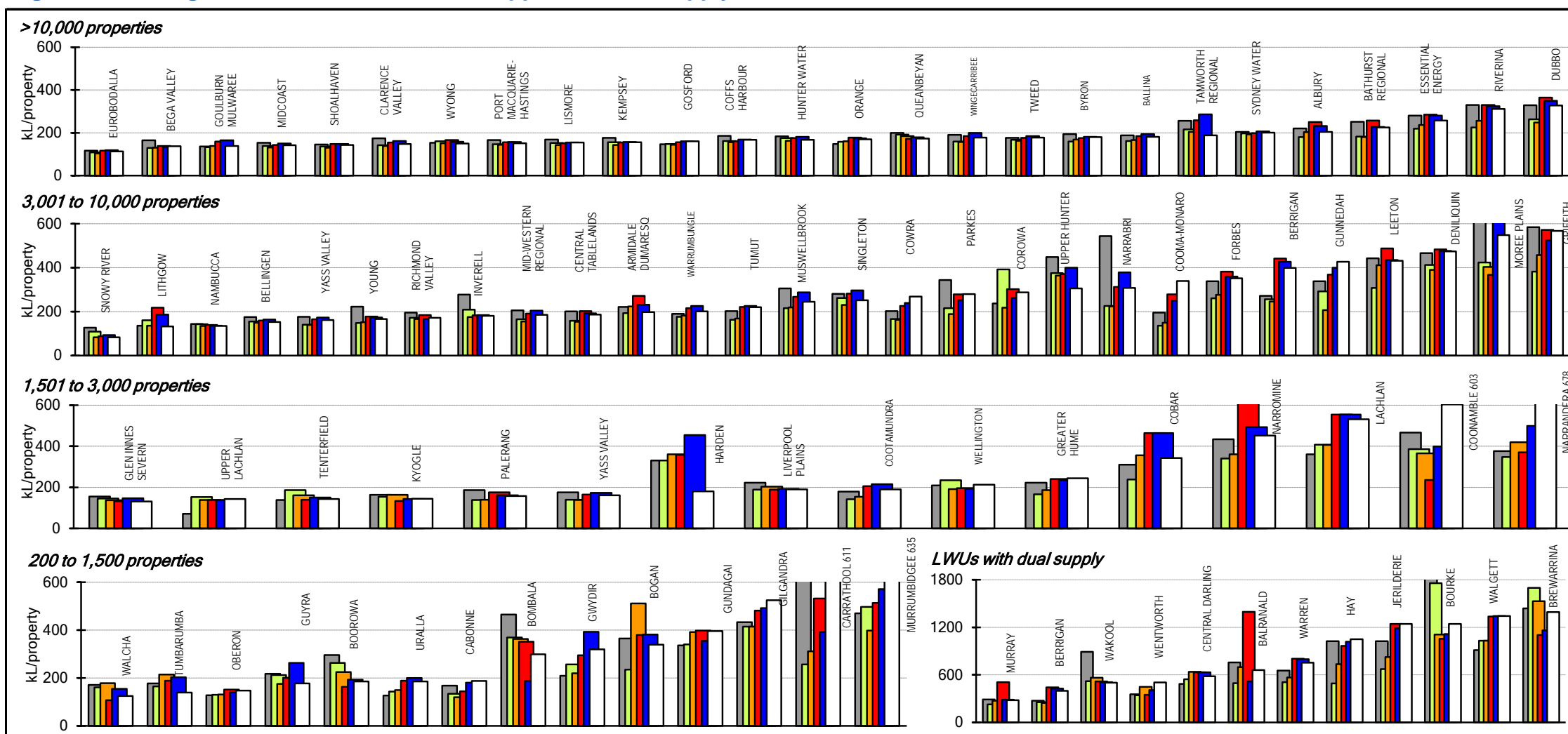
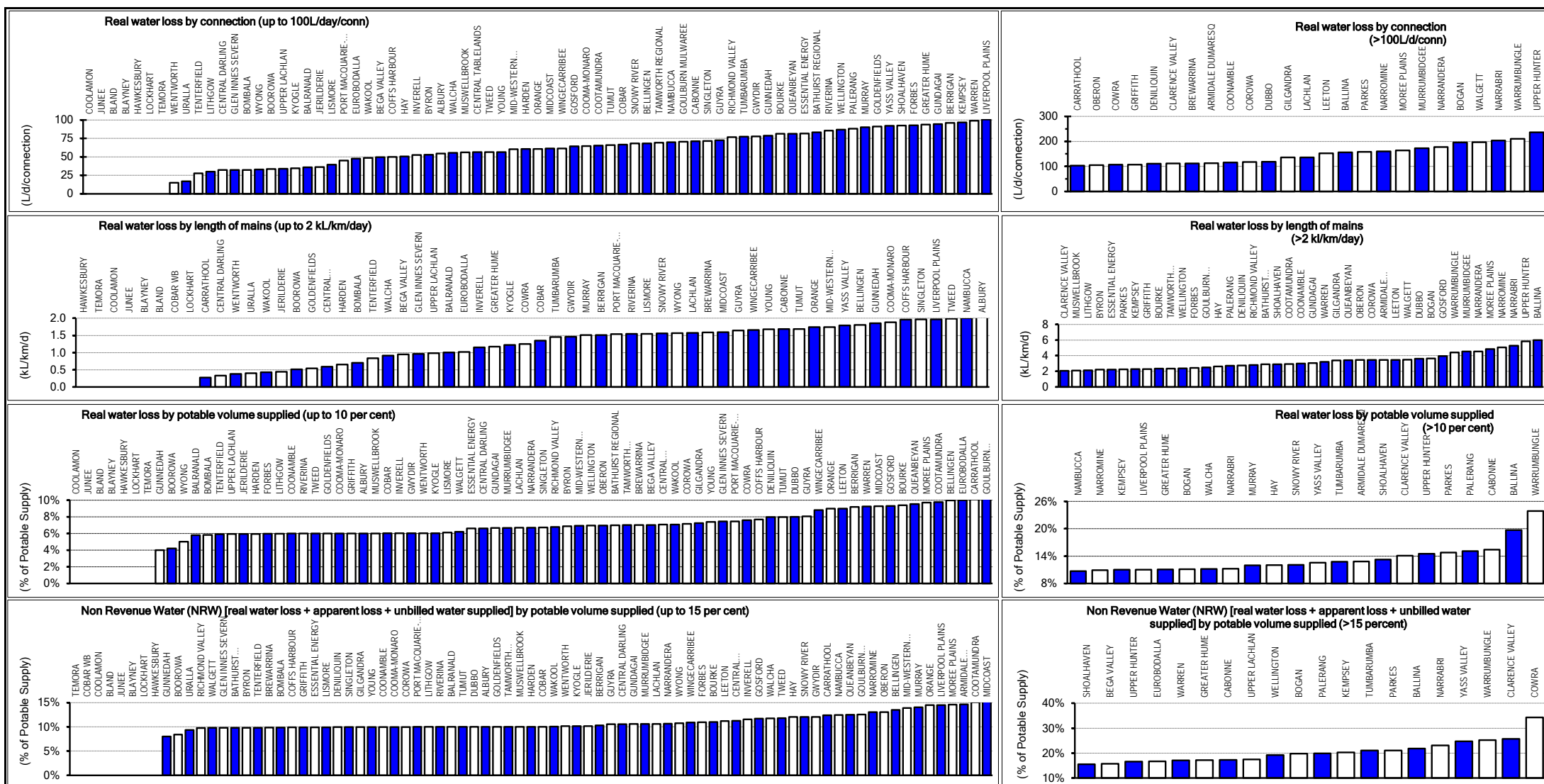




Figure 27: Water losses (real loss (leakage) [A10, A11] and apparent loss) - water supply



Parameter:

Real water losses (WB68) x 1000

Parameter:

No. of service connections (WB30)

Parameter:

Real water losses (WB68) x 100

Parameter:

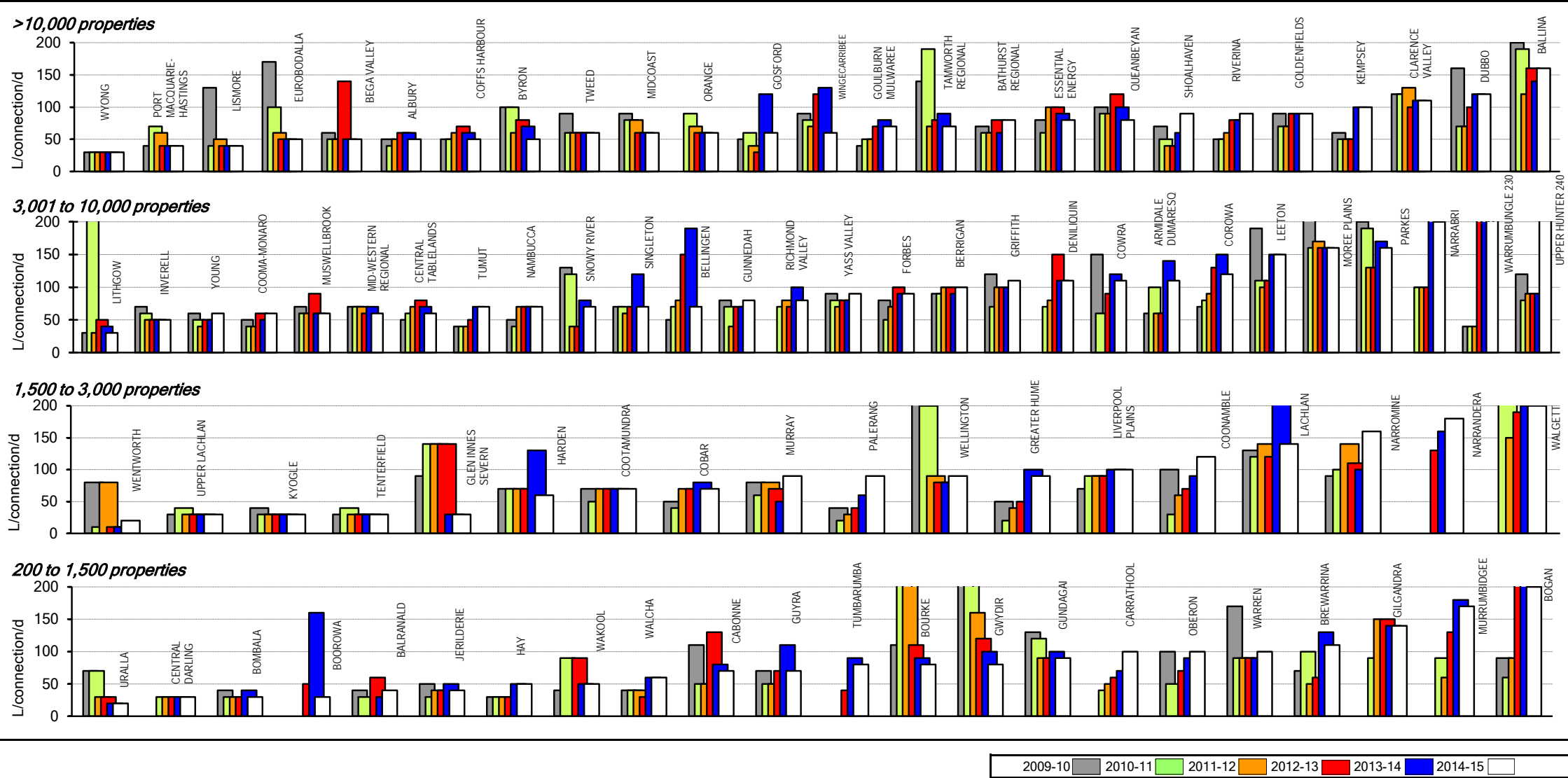
Length of mains (WB22)

Notes:

$$\frac{\text{Real \& apparent water losses (WB69) + Unbilled water supplied (WB61)}}{\text{Total potable water supplied (WB62)}} \times 100$$

1. Refer to Note 9 of General Notes on page 33 for water losses. Refer also to figures 28 and 29 on pages 66 and 67, Table 5 on page 116, Table 10 on page 172, Table 10A on page 175, graph 13 on page 208 & figure 34 on page 112.
2. For general notes see page 32.

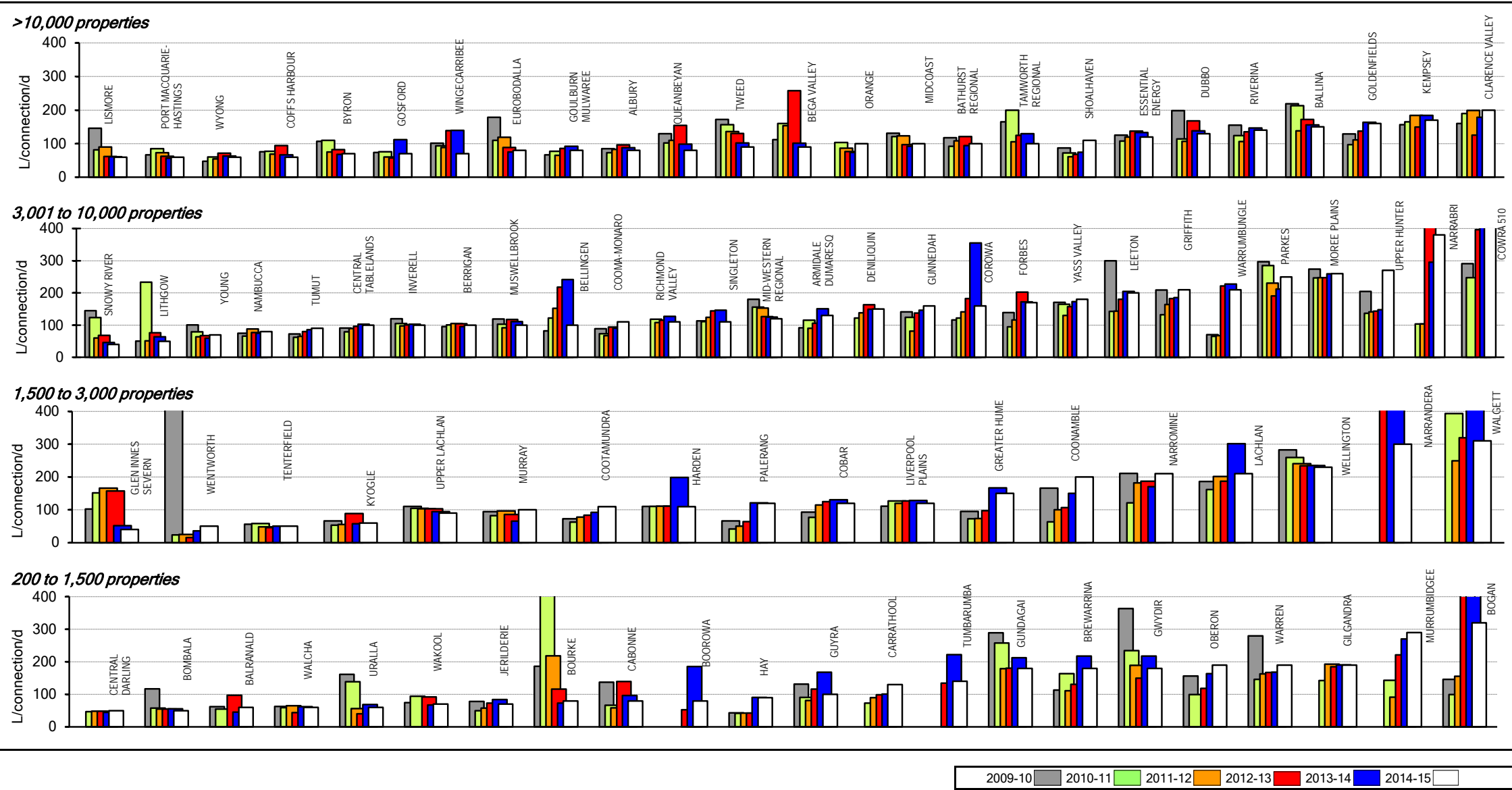
Figure 28: Real losses (L/service connection/d) - water supply - A10



Parameter:  $\frac{\text{Real water losses (WB68)} \times 1000}{\text{No. of service connections (WB30)}}$

- Notes:
1. This figure shows ranked values of the 2014-15 real losses for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the real losses for the 28 LWUs shown ranges from 30 to 240 L/service connection/d. Results for the previous 5 years are also shown.
  2. The Statewide median real losses is 60 L/service connection/d [National Median is 76 L/service connection/d]. Refer also to Table 10 on page 172.
  3. As a result of the Regional NSW Water Loss Management Program 2006-2011, many utilities have been able to reduce their real losses. Two notable results are Uralla, which reduced losses from 15% to 3% and Snowy River, which reduced losses from 34% to 12% of the potable water supplied (refer to columns 10 and 13 of Table 10A on page 175). Refer also to graph 13 on page 208 and figure 34 on page 112.
  4. For general notes see page 32.

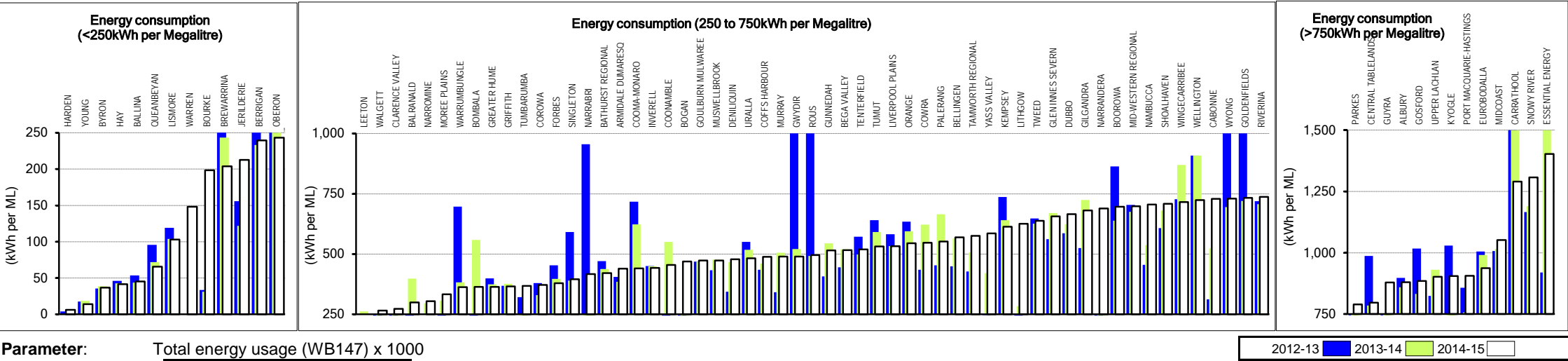
Figure 29: Non Revenue Water (L/service connection/d) - water supply



**Parameter:**  $\frac{[\text{Real \& apparent water losses (WB69) + Unbilled water supplied (WB61)}] \times 100}{\text{No. of service connections (WB30)}}$

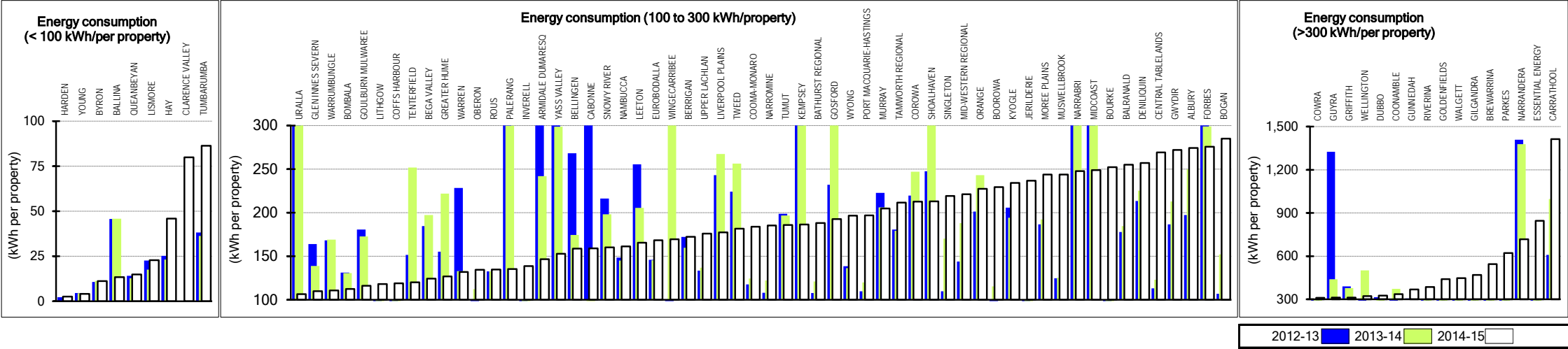
- Notes:**
1. This figure shows ranked values of the 2014-15 non revenue water for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the non revenue water for the 28 LWUs shown ranges from 40 to 510 L/service connection/d of the potable supply. Results for the previous 5 years are also shown.
  2. The Statewide median non-revenue water is 94 L/service connection/d.
  3. Refer also to Table 8A on page 159 and Table 10 on page 172.
  4. For general notes see page 32.

Figure 30: Energy consumption per ML - water supply



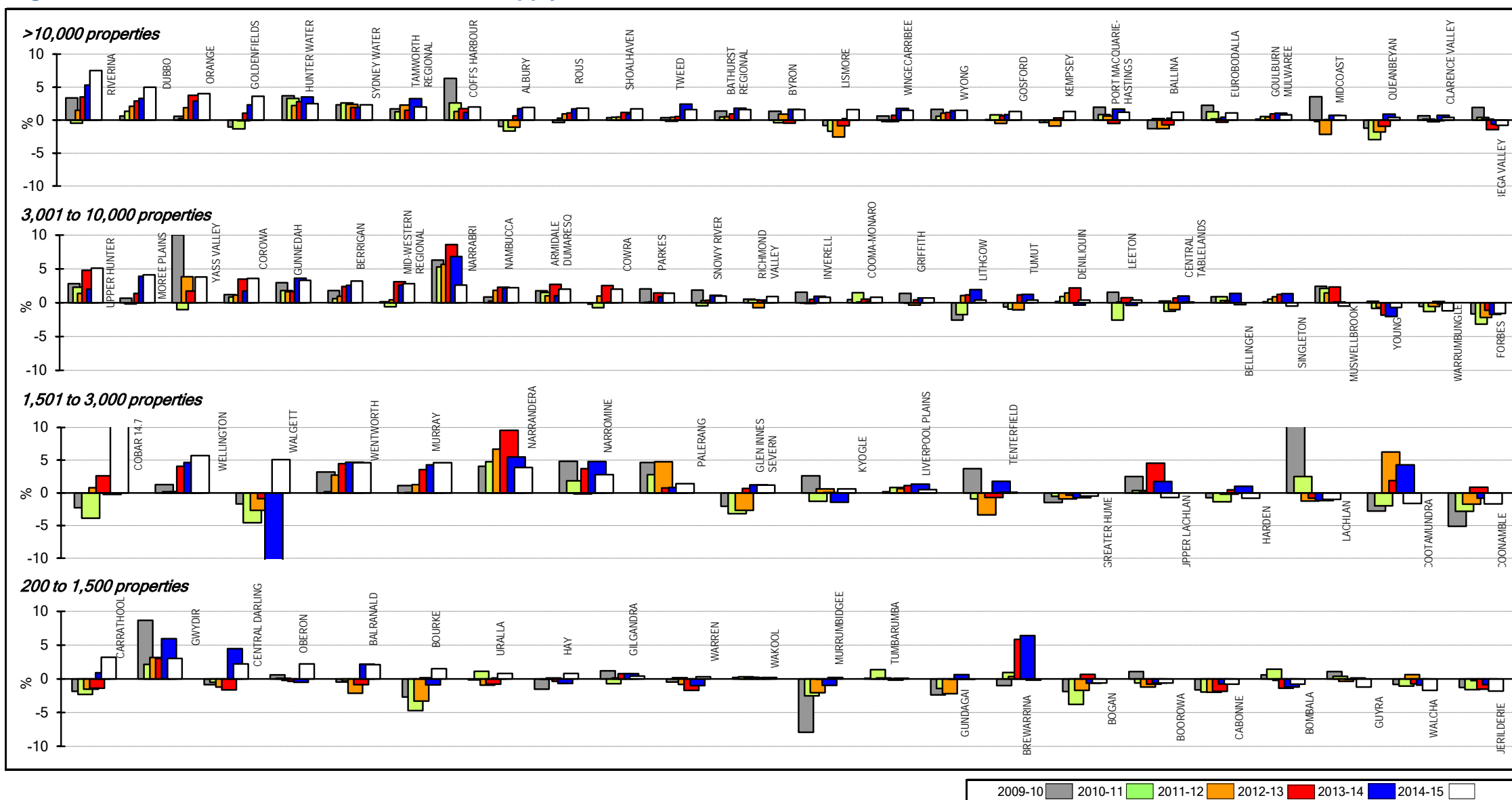
- Notes:
- 1. This figure shows ranked values of the 2014-15 total energy consumption per ML. The energy consumption per ML for the 85 Local Water Utilities (LWUs) shown range from about 14 to 1400kWh per ML. Results for the previous 2 years are also shown.
  - 2. For general notes see page 32.

Figure 31: Energy consumption per property - water supply



- Notes:
- 1. This figure shows ranked values of the 2014-15 total energy consumption per connected property. The energy usage per connected property for the 83 Local Water Utilities (LWUs) shown range from 4 to 1410kWh per connected property. Results for the previous 2 years are also shown.
  - 2. For general notes see page 32.

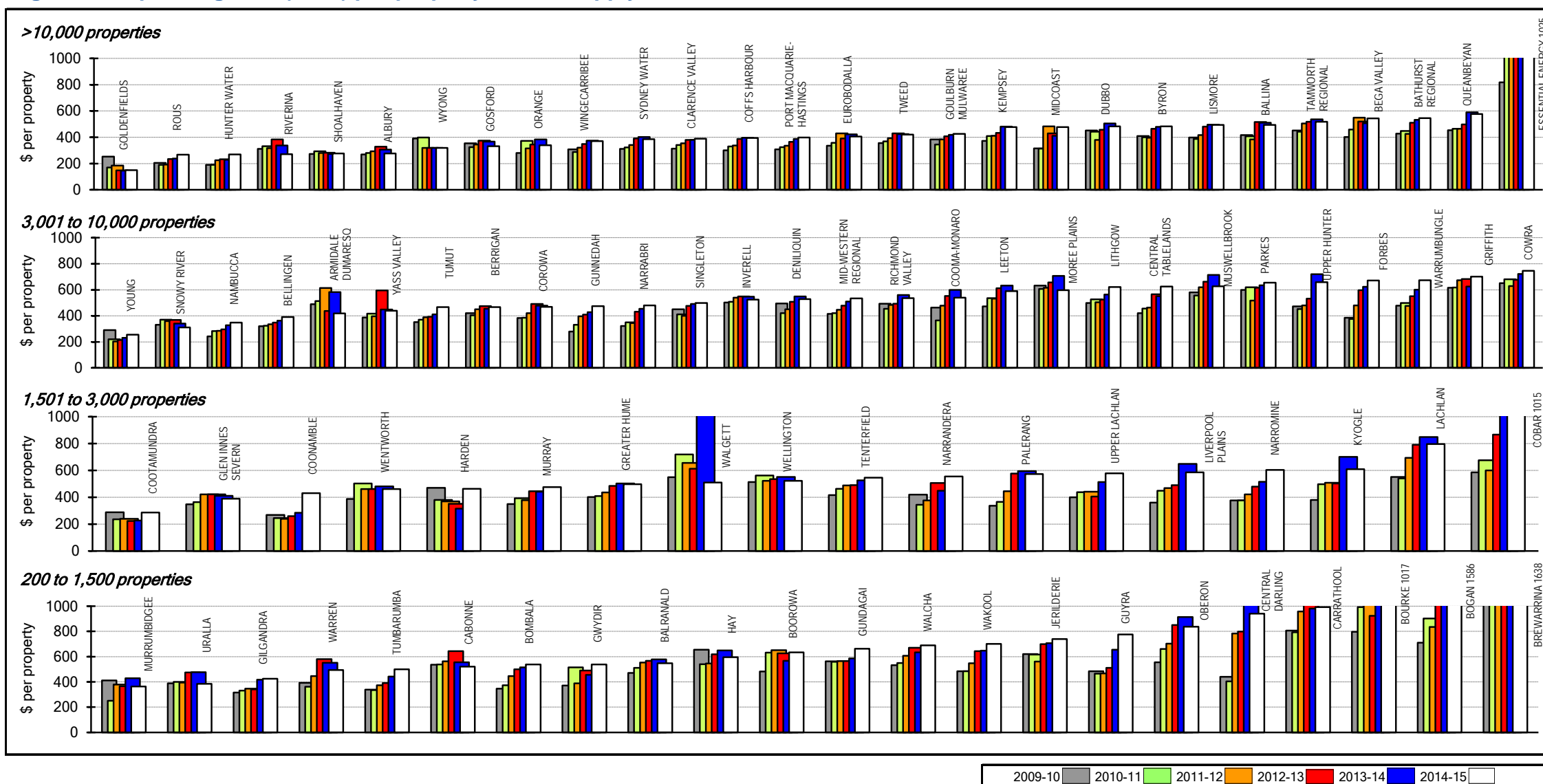
Figure 32: Economic real rate of return - water supply - F17



**Parameter:** 
$$\frac{[\text{Operating result (W}_{15}) + \text{interest expense (W}_{4a}) - \text{interest income (W}_{9}) - \text{grants for acquisition of assets (W}_{11a})] \times 100}{\text{Written down replacement cost of system assets, plant \& equipment (W}_{33})}$$

**Notes:**

1. This figure shows ranked values of the 2014-15 water supply economic real rate of return (ERRR) for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 water supply real rate of return for the 28 LWUs shown ranges from 5% to -2%. Results for the previous 5 years are also shown.
2. The statewide median water supply ERRR is 1.6% [National Median is 1.9%]. Refer also to page 26, Table 5 on page 116, Table 6 on page 134 and figure 43 on page 111.
3. The ERRR includes developer provided assets and capital contributions from other LWUs.
4. For general notes see page 32.

**Figure 33: Operating cost (OMA) per property - water supply - F11**

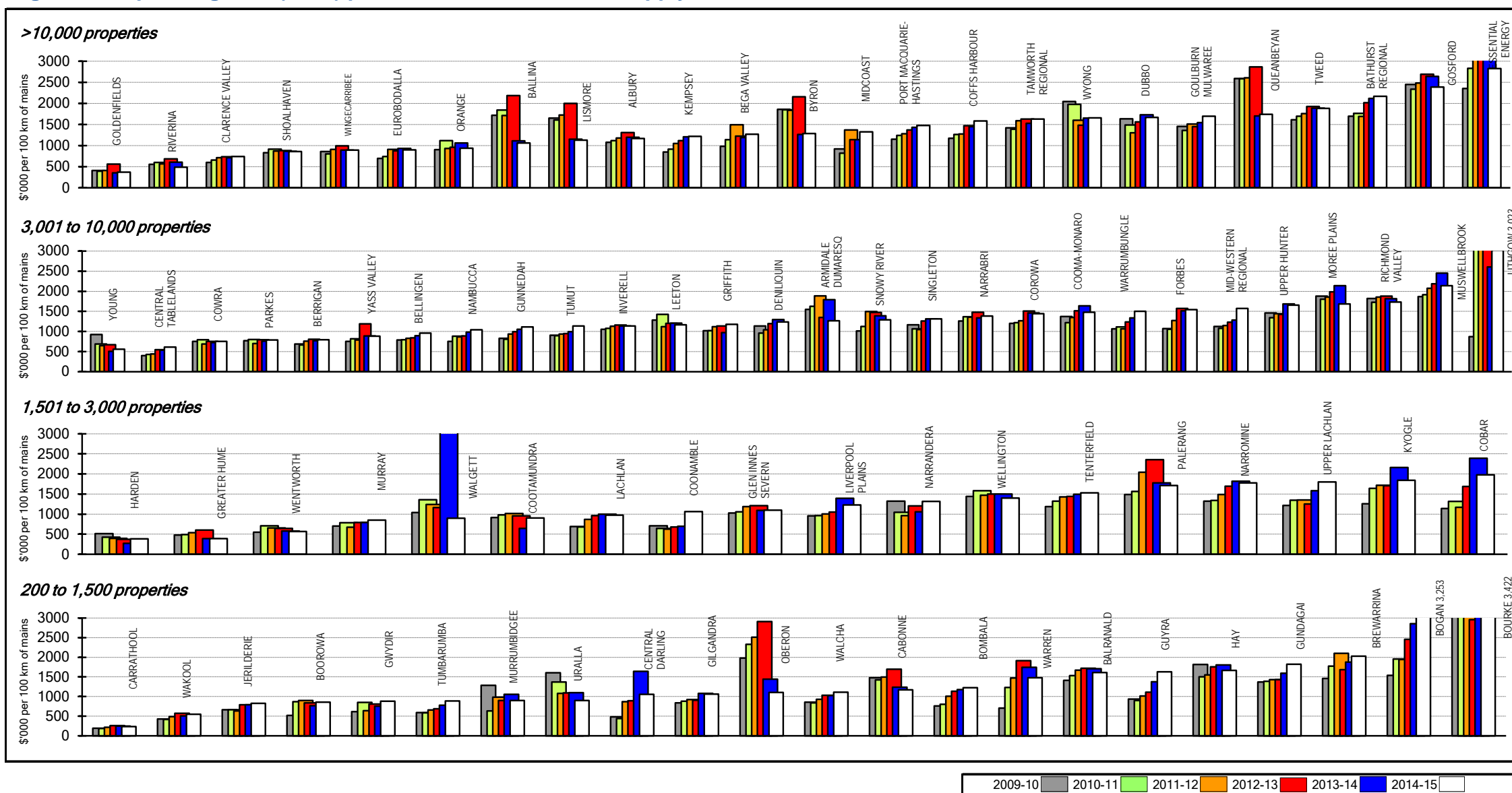
**Parameter:**  $\frac{\text{Management Expenses (W\_1)} + \text{Total Operations Expenses (W\_2)} - \text{Purchase of Water} + \text{prorata Bulk Supplier's OMA}}{[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}}$

[No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment

**Notes:**

1. This figure shows ranked values of the 2014-15 water supply operating cost (OMA - operation, maintenance and administration) per property for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 water supply operating costs for the 28 LWUs shown ranges from \$254 to \$746 per connected property. Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median operating cost per connected property is \$400 [National Median is \$455]. Refer also to page 27, Table 5 on page 116, Table 11 on page 180, Table 13 on page 186, graph 25 on page 211, figure 49 on page 112 and pages 21 and 23.
3. For general notes see page 32.



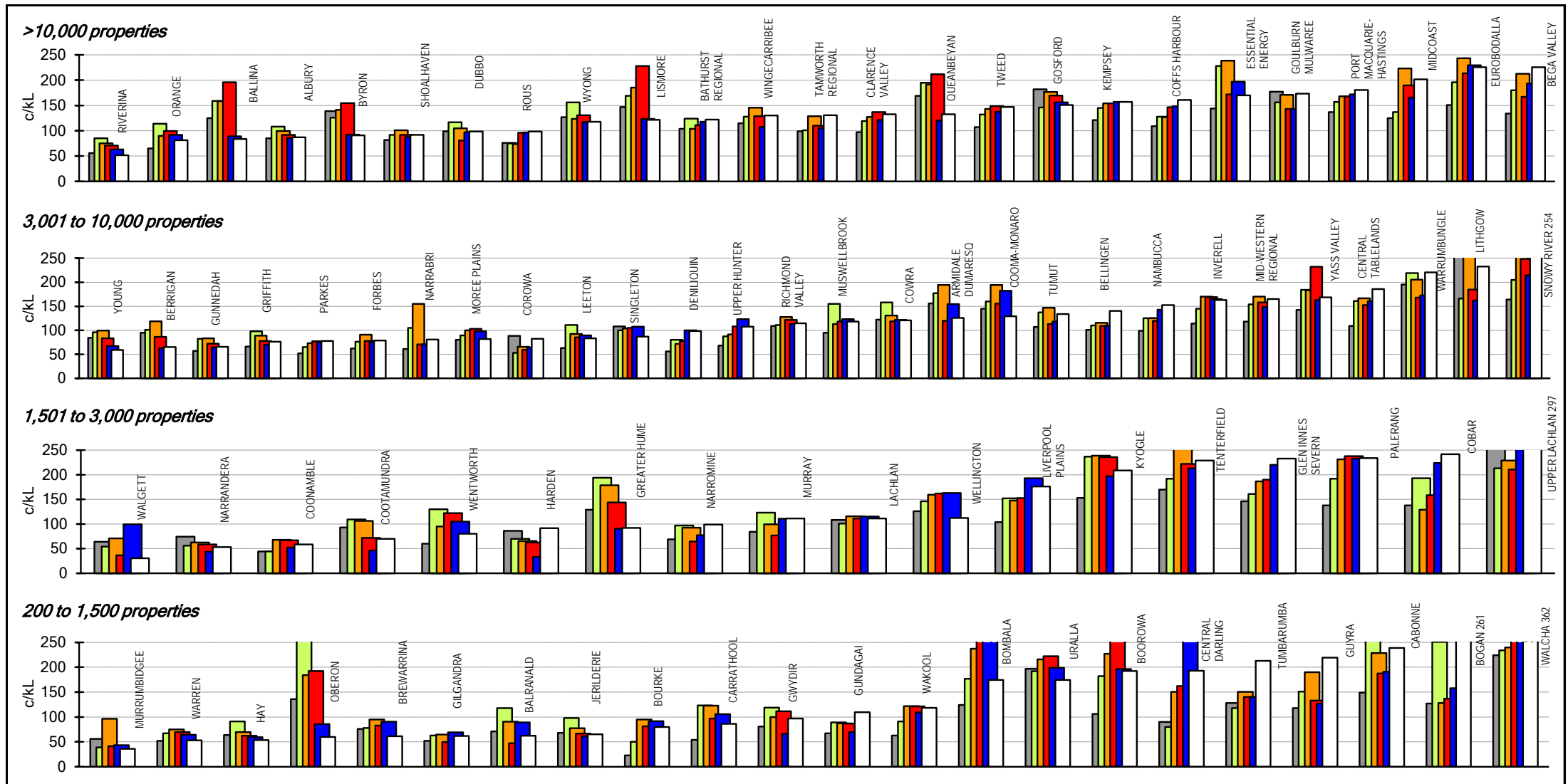
**Figure 34: Operating cost (OMA) per 100km of main - water supply**

**Parameter:**  $\frac{\text{Water Main Operation Expenses (W\_2c) + Water Main Maintenance Costs (W\_2d)}}{\text{Length of Distribution and Reticulation Mains (WB22) x 100}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 water supply operating cost (OMA - operation, maintenance and administration) per 100 km of main for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 operating costs for the 28 LWUs shown ranges from \$0.56M to \$3.02M per 100km of distribution and reticulation mains (excludes source transfer mains). Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median operating cost is \$1.32M per 100km of water main. Refer also to Table 11 on page 180 and Table 13 on page 186.
3. For general notes see page 32.

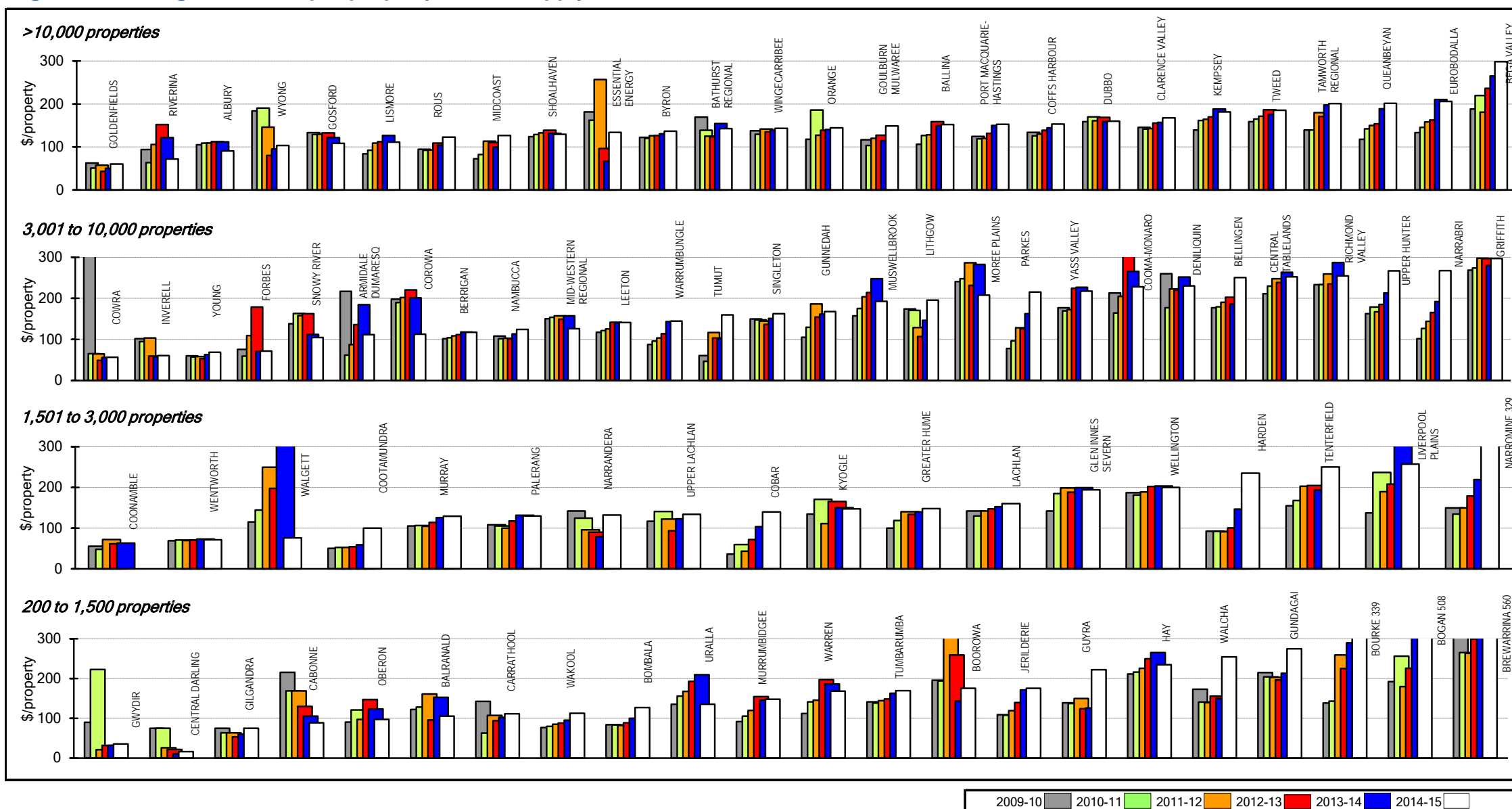
Figure 35: Operating cost (OMA) per kL - water supply



**Parameter:**  $\frac{\text{Management Expenses (W}_1\text{)} + \text{Total Operations Expenses (W}_2\text{)} - \text{Purchase of Water (W}_{2o}\text{)}}{\text{Total Potable Water Supplied (WB62)}}$

**Notes:**

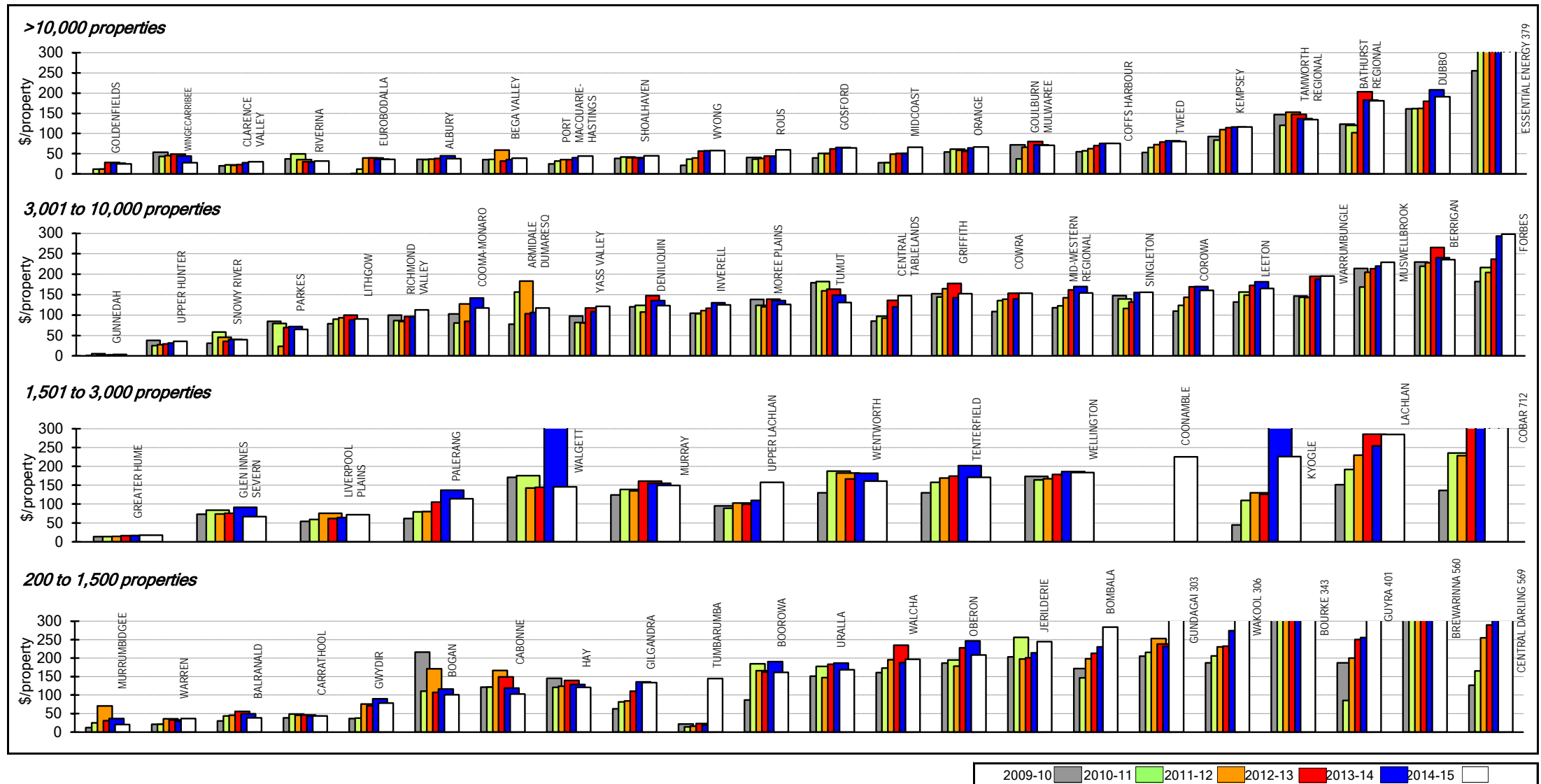
1. This figure shows ranked values of the 2014-15 water supply operating cost (OMA - operation, maintenance and administration) per kL for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 operating costs per kL for the 28 LWUs shown ranges from 59 to 254 c/kL. Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median operating cost is 129c/kL. Refer also to Table 6 on page 134.
3. For general notes see page 32.

**Figure 36: Management cost per property - water supply****Parameter:**

Administration Cost (W\_1a) + Engineering Cost (W\_1b)

$$[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}$$
**Notes:**

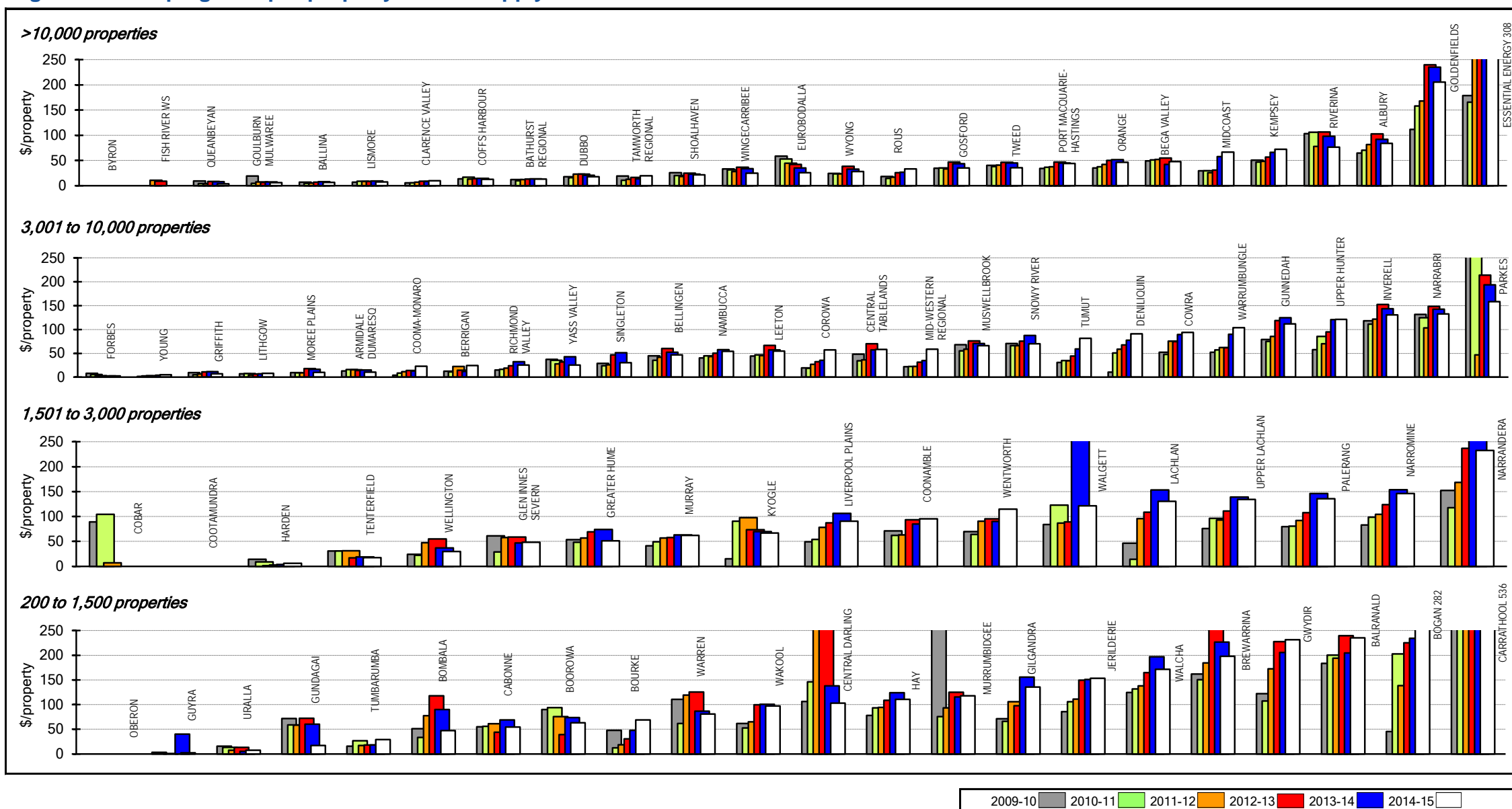
1. This figure shows ranked values of the 2014-15 water supply management cost per property for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 management costs per property for the 28 LWUs shown range from \$56 to \$297. Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median management cost is \$141 per connected property. Refer also to page 27, Table 11 on page 180 and figure 31 on page 112.
3. For general notes see page 32.

**Figure 37: Treatment cost per property - water supply**

**Parameter:**  $\frac{\text{Treatment Operation Expenses (W\_2j)} + \text{Treatment Chemical Cost (W\_2k)} + \text{Treatment Maintenance Expenses (W\_2l)}}{[\text{No. of Residential Assessments (WB32)} + \text{No. of Non-Residential Assessments (WB33)}] \times \text{No. of Connected Properties per Assessment}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 water treatment cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 treatment costs for the 24 LWUs shown range from \$0 to \$300 per connected property. Results for the previous 5 years are also shown in Jan 2015\$.
2. Only LWUs with a water treatment works involving at least filtration and disinfection for over 50% of their supply have been shown.
3. The Statewide median water treatment cost is \$58 per connected property. Refer also to pages 21, 23, 27 and Table 13 on page 186.
4. For general notes see page 32.

**Figure 38: Pumping cost per property - water supply**

**Parameter:** Pumping Station Operation Expenses (W\_2g) + Pumping Station Energy Cost (W\_2h) + Pumping Station Maintenance Costs (W\_2i)

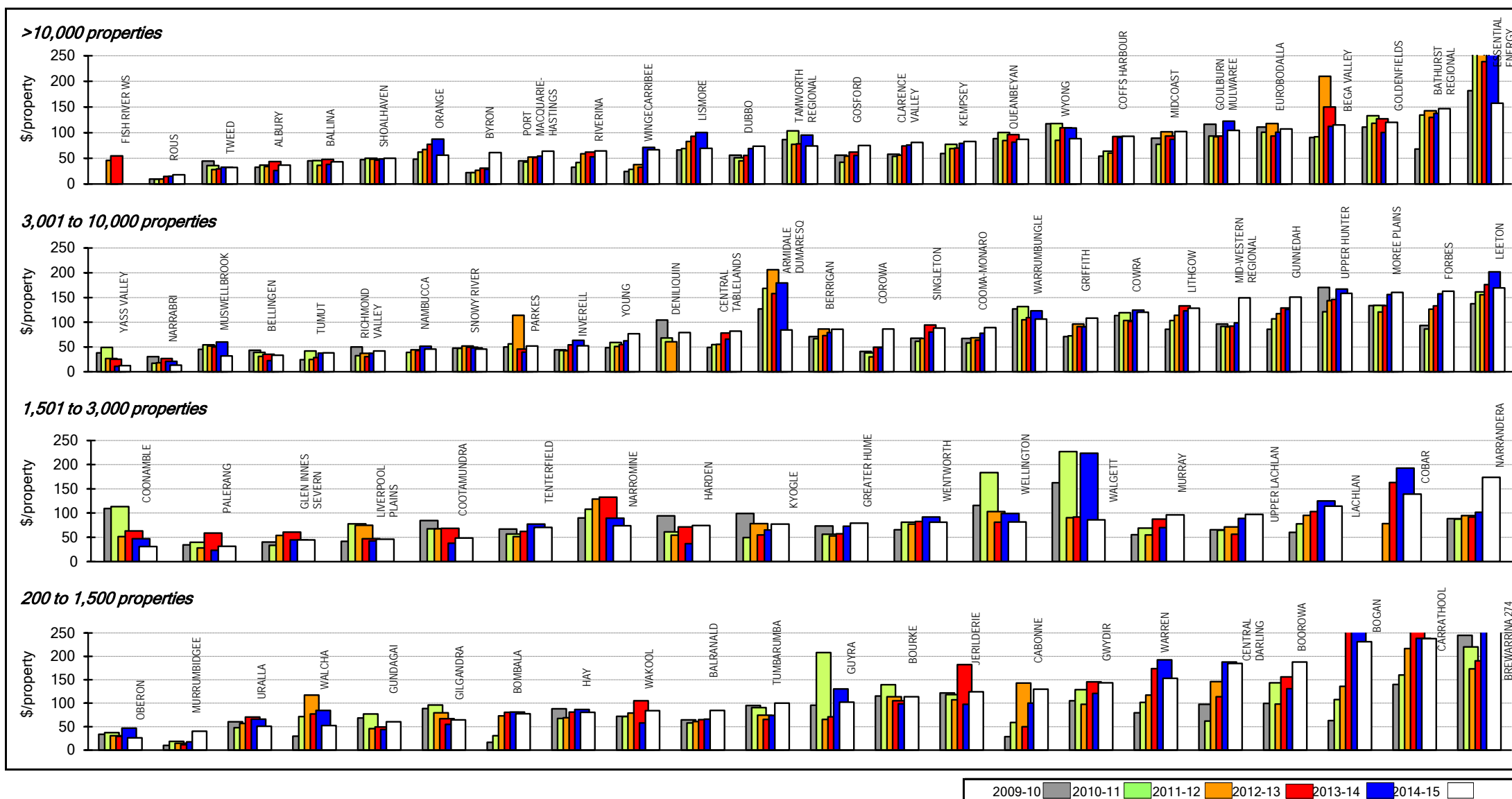
[No. of Residential Assessments (WB32) + No. of Non-Residential Assessments (WB33)] x No. of Connected Properties per Assessment

**Notes:**

1. This figure shows ranked values of the 2014-15 water pumping cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 water pumping costs for the 28 LWUs shown ranges from \$2 to \$159 per connected property. Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median water pumping cost (including energy costs) is \$31 per connected property. Refer also to page 27 and Table 13 on page 186.
3. For general notes see page 32.



Figure 39: Water main cost per property - water supply



Parameter: Water main operation expenses (W\_2c) + water main maintenance costs (W\_2d)

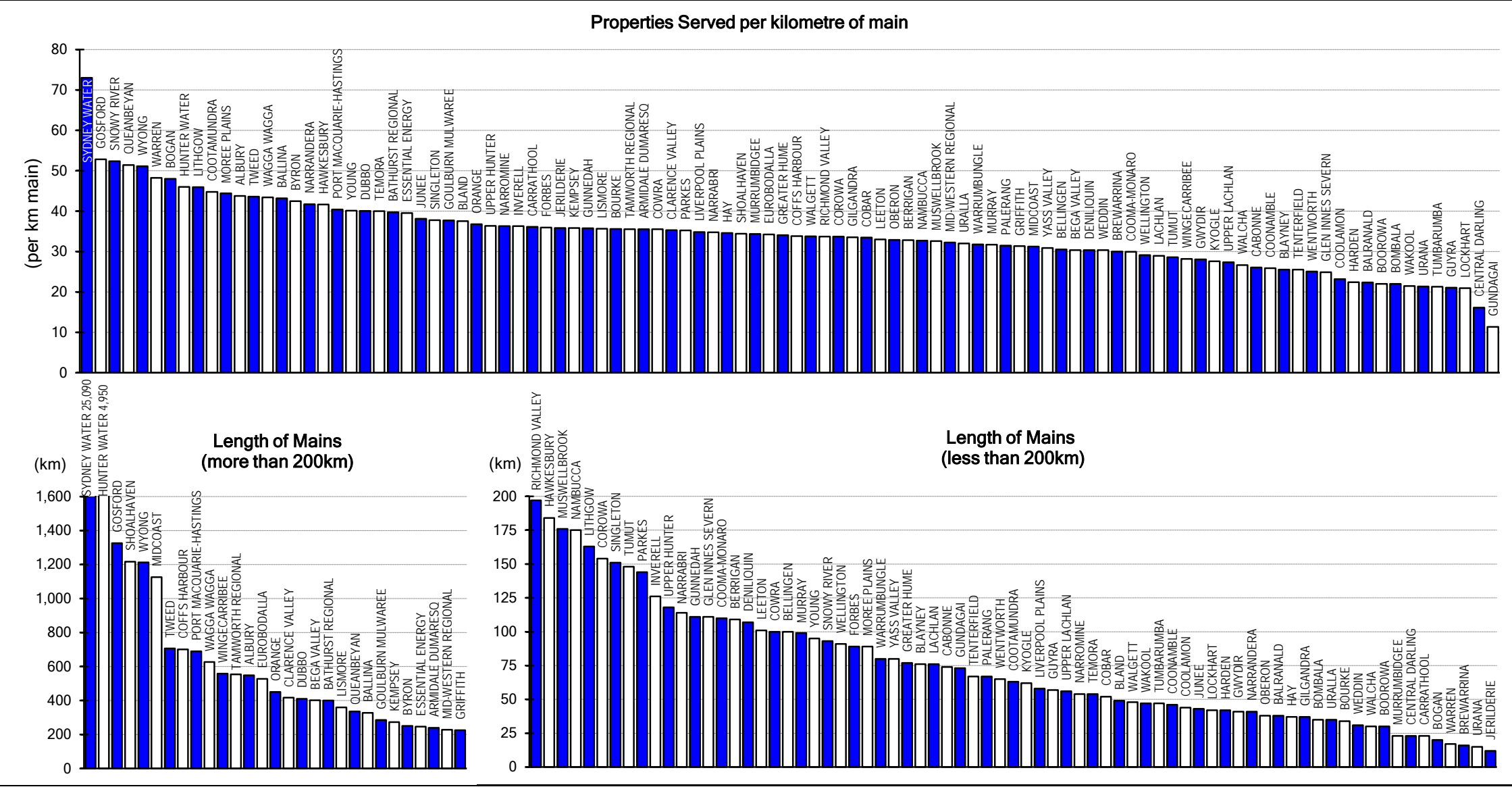
[No. of residential assessments (WB32) + No. of non-residential assessments (WB33)] x No. of connected properties per assessment

#### Notes:

1. This figure shows ranked values of the 2014-15 water main operating cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 water main costs for the 28 LWUs shown ranges from \$13 to \$169 per property. Results for the previous 5 years are also shown in Jan 2015\$.
2. The Statewide median water main cost is \$74 per property. Refer also to page 27 and Table 13 on page 186.
3. For general notes see page 32.

9. SEWERAGE FIGURES

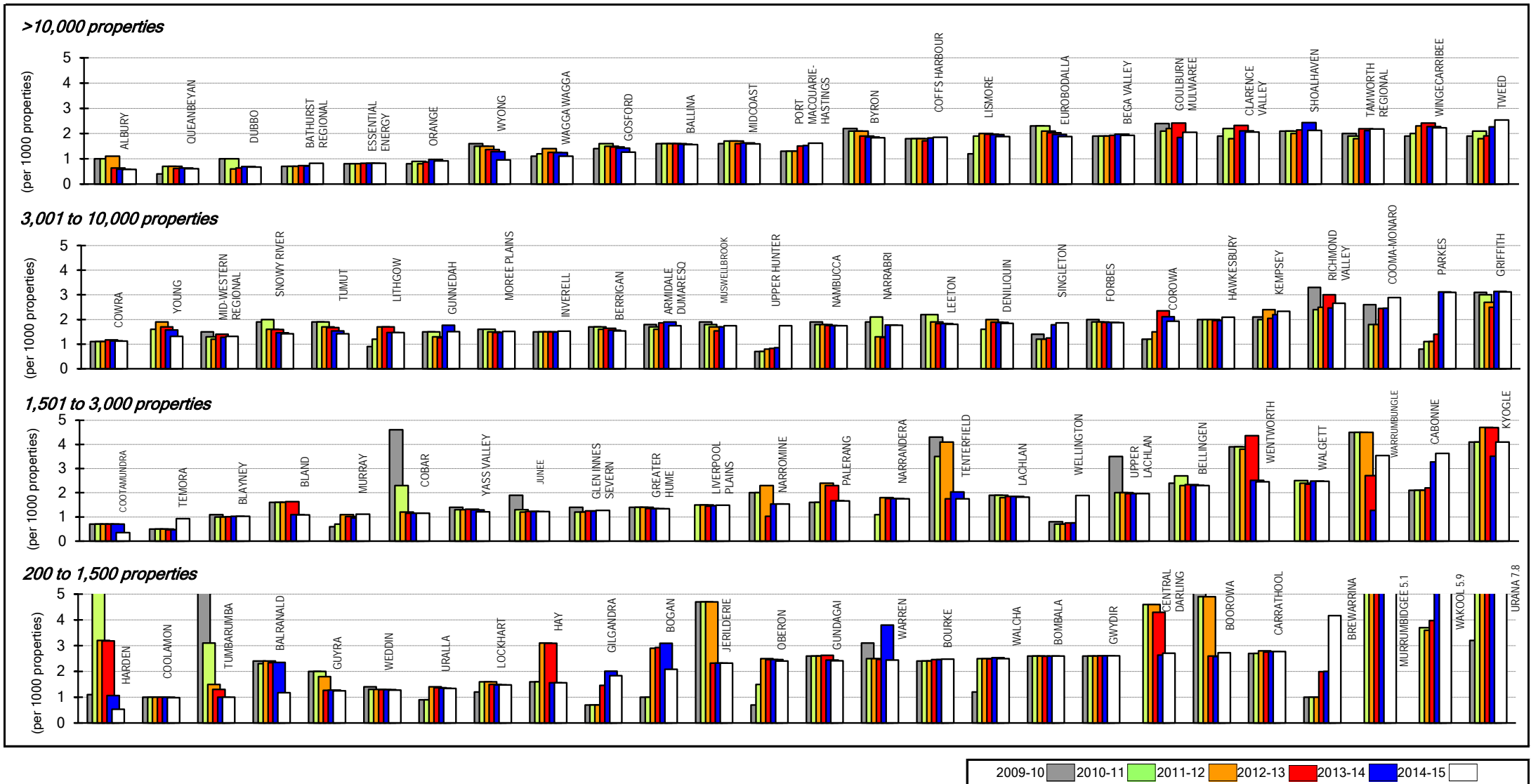
Figure 40: Properties served per km of main, length of mains - sewerage - A5



Parameter: 
$$\frac{[\text{No. of Residential Assessments (SB13)} + \text{No. of Non-Residential Assessments (SB14)}] \times \text{No. of Connected Properties per Assessment}}{\text{Length of Reticulation/Gravity Mains (SB7)} + \text{Length of Rising Mains (SB8)}}$$

- Note:
- 1. The top graph shows the ranked values of number of connected properties per km of sewerage main for each Local Water Utility (LWU). Each bar represents one LWU. The bottom graph of this figure shows the total length of mains for the corresponding LWUs.
  - 2. The Statewide median sewerage connected properties per km of main is 38 [National Median is 40 per km of main]. Refer also to Table 14 on page 189 and graph 2 on page 205.
  - 3. For general notes see page 32.

Figure 41: Employees - sewerage

**Parameter:**

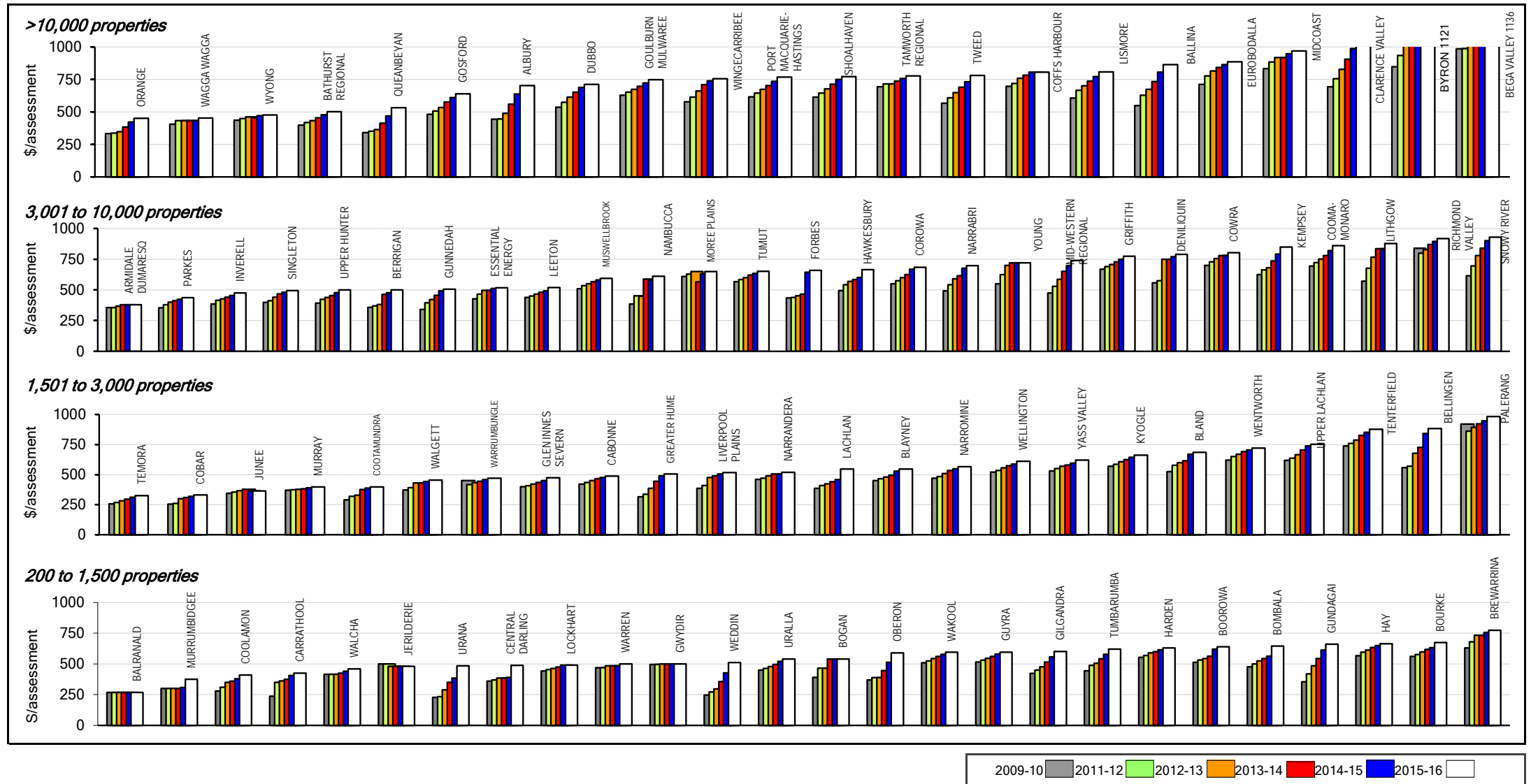
Full-time Equivalent Employees (SB49) x 1000

[No. of Residential Assessments (SB13) + No. of Non-Residential Assessments (SB14)] x No. of Connected Properties per Assessment

**Notes:**

1. This figure shows ranked values of the 2014-15 sewerage employees for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewerage employees for the 26 LWUs shown ranges from about 1 to 3 per 1,000 connected properties. Results for the previous 5 years are also shown.
2. The 2014-15 Statewide median number of sewerage employees is 1.6 per 1,000 connected properties. Refer also to pages 21, 23, 27 and Table 14 on page 189.
3. For general notes see page 32.

Figure 42: Typical residential bill – sewerage - P6

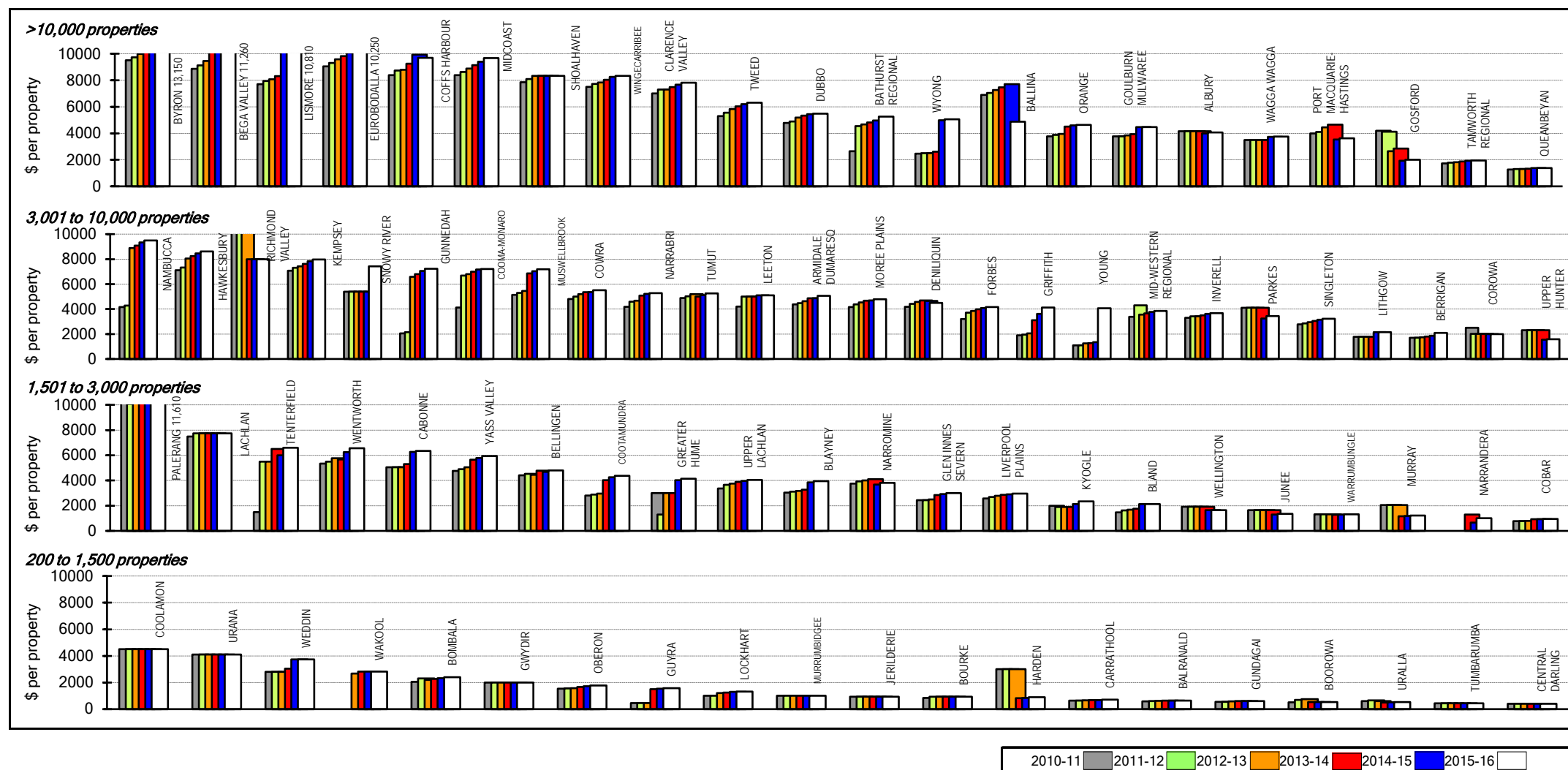


Parameter: Residential Access Charge

#### Notes:

1. This figure shows ranked values of the 2015-16 typical residential bill for sewerage for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2015-16 typical residential bill for sewerage for the 27 LWUs shown ranges from about \$379 to \$930.
2. The 2015-16 Statewide median typical residential bill for sewerage is \$697 per assessment [National Median for 2014-15 is \$667 per assessment]. Refer also to Table 5 on page 116, Table 7 on page 146, graph 6 on page 206 and figure 12 on page 113.
3. For general notes see page 32.

Figure 43: Typical developer charge - sewerage

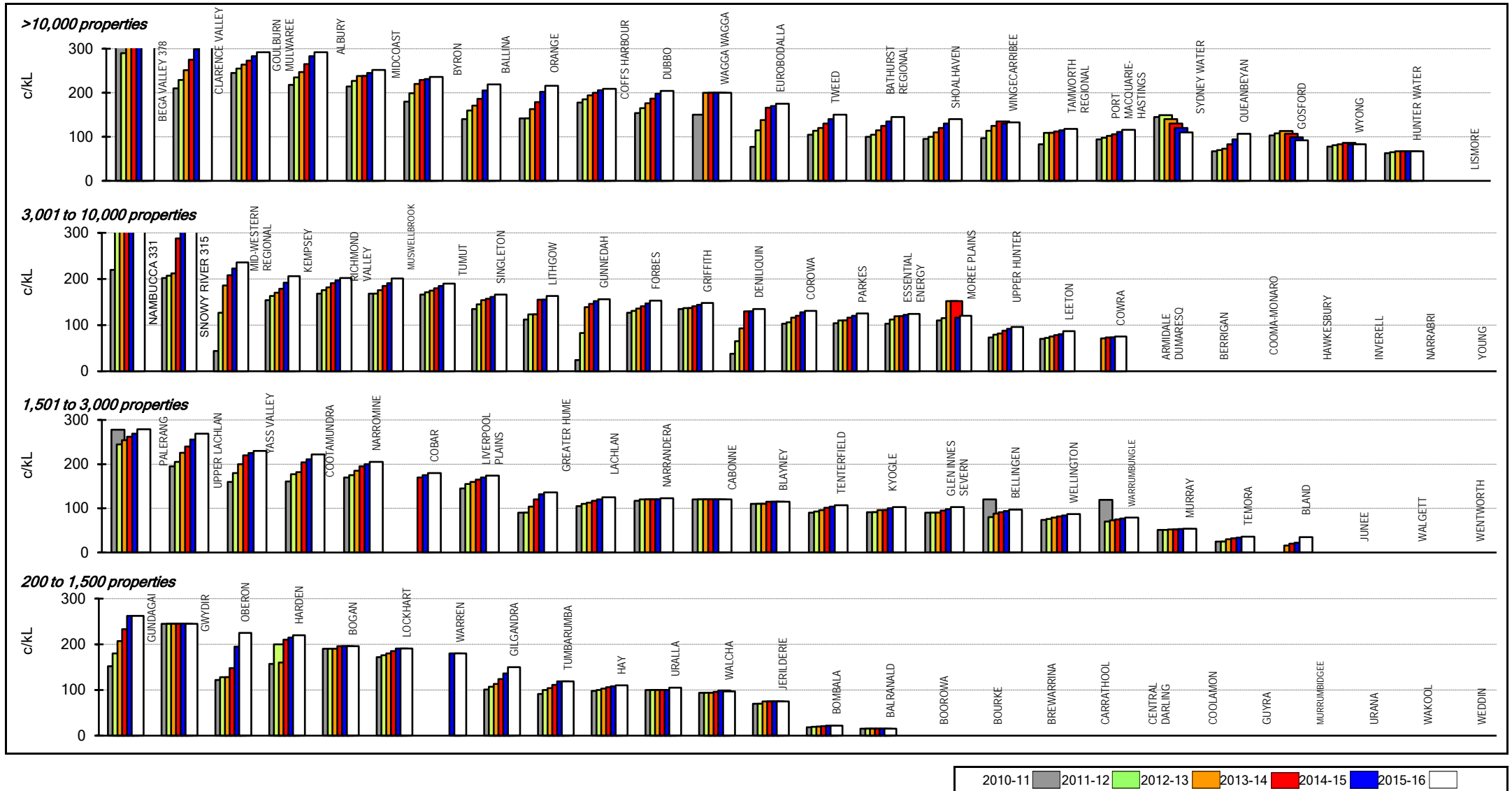


**Parameter:** Typical Sewerage Developer Charge (SB62)

**Notes:**

1. This figure shows ranked values of the 2015-16 typical developer charge for sewerage for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the typical developer charge for sewerage for the 26 LWUs shown ranges from \$9,500 to \$1,600 per equivalent tenement (ET).
2. The 2015-16 Statewide median typical sewerage developer charge was \$5,100 per ET, which is 31% of the current replacement cost of sewerage system assets of \$16,500 per assessment. Refer also to Table 7 on page 146.
3. 90 LWUs levied sewerage developer charges.
4. For general notes see page 32.



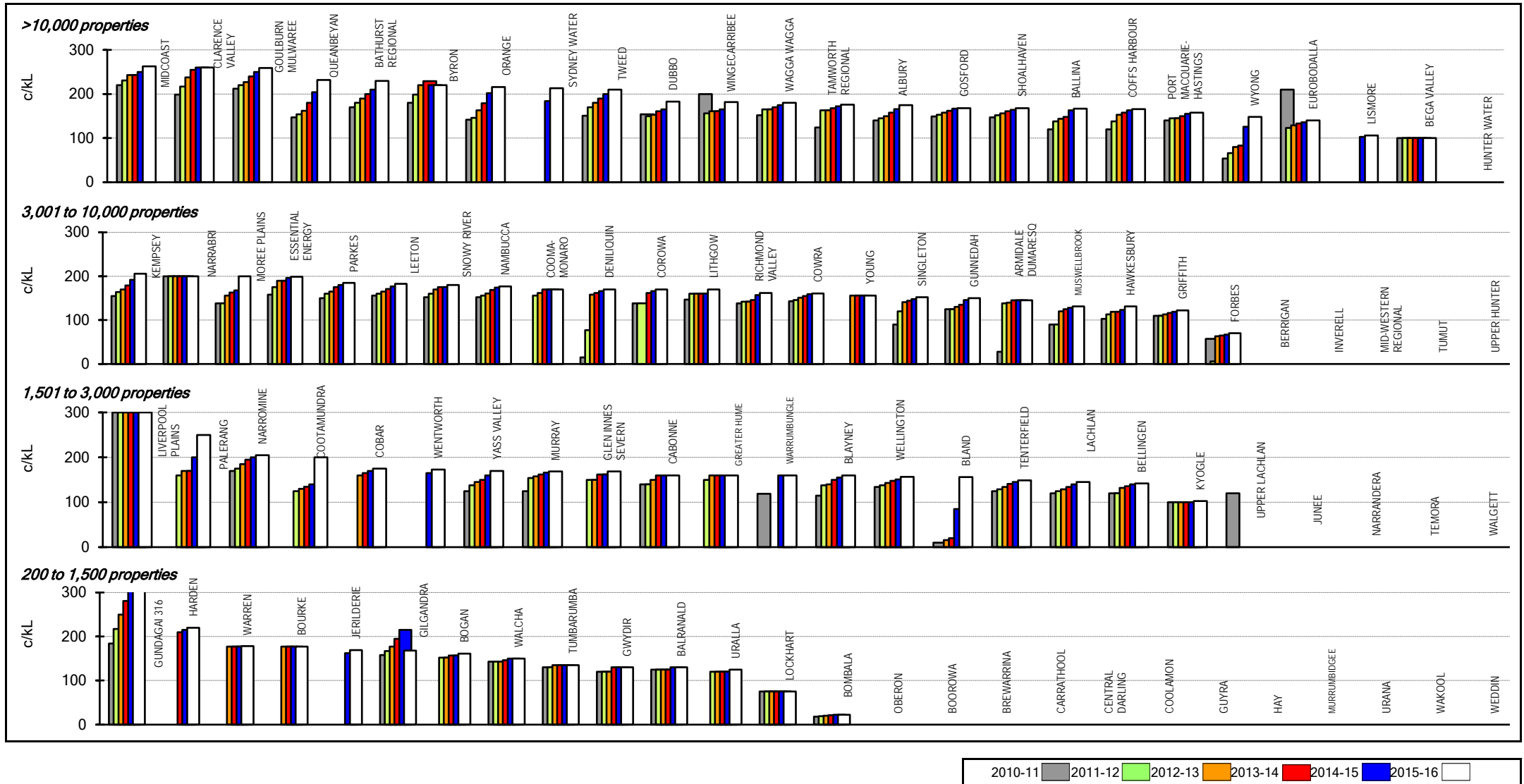
**Figure 44: Non-residential sewer usage charge - sewerage**

**Parameter:** Non-residential sewer usage charge (c/kL)

**Notes:**

1. This figure shows ranked values of the 2015-16 non-residential sewer usage charge for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the non-residential sewer usage charge for the 26 LWUs shown ranges from 331 to 75c/kL. 7 utilities do not have a sewer usage charge.
2. The 2015-16 Statewide median non-residential sewer usage charge was 150.0c/kL. Refer also to Table 7 on page 146 and figure 14 on page 113.
3. For general notes see page 32.

Figure 45: Trade waste usage charge - sewerage

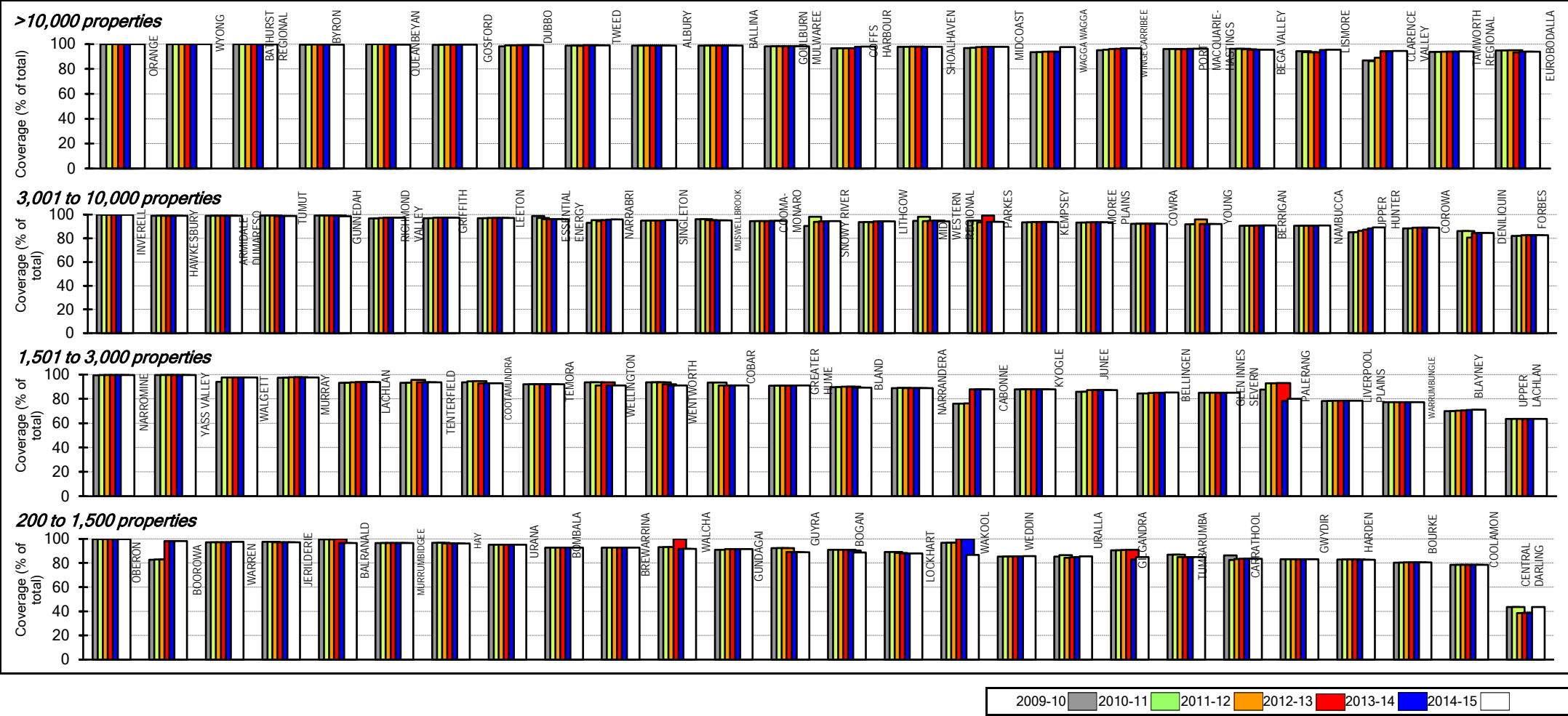


**Parameter:** Trade waste usage charge (c/kL)

**Notes:**

1. This figure shows ranked values of the 2015-16 trade waste usage charge for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the trade waste usage charge for the 27 LWUs shown ranges from 206 to 70c/kL. 5 utilities do not have a trade waste usage charge.
2. Refer also to Table 7 on page 146 and Table 7C on page 153.
3. For general notes see page 32.

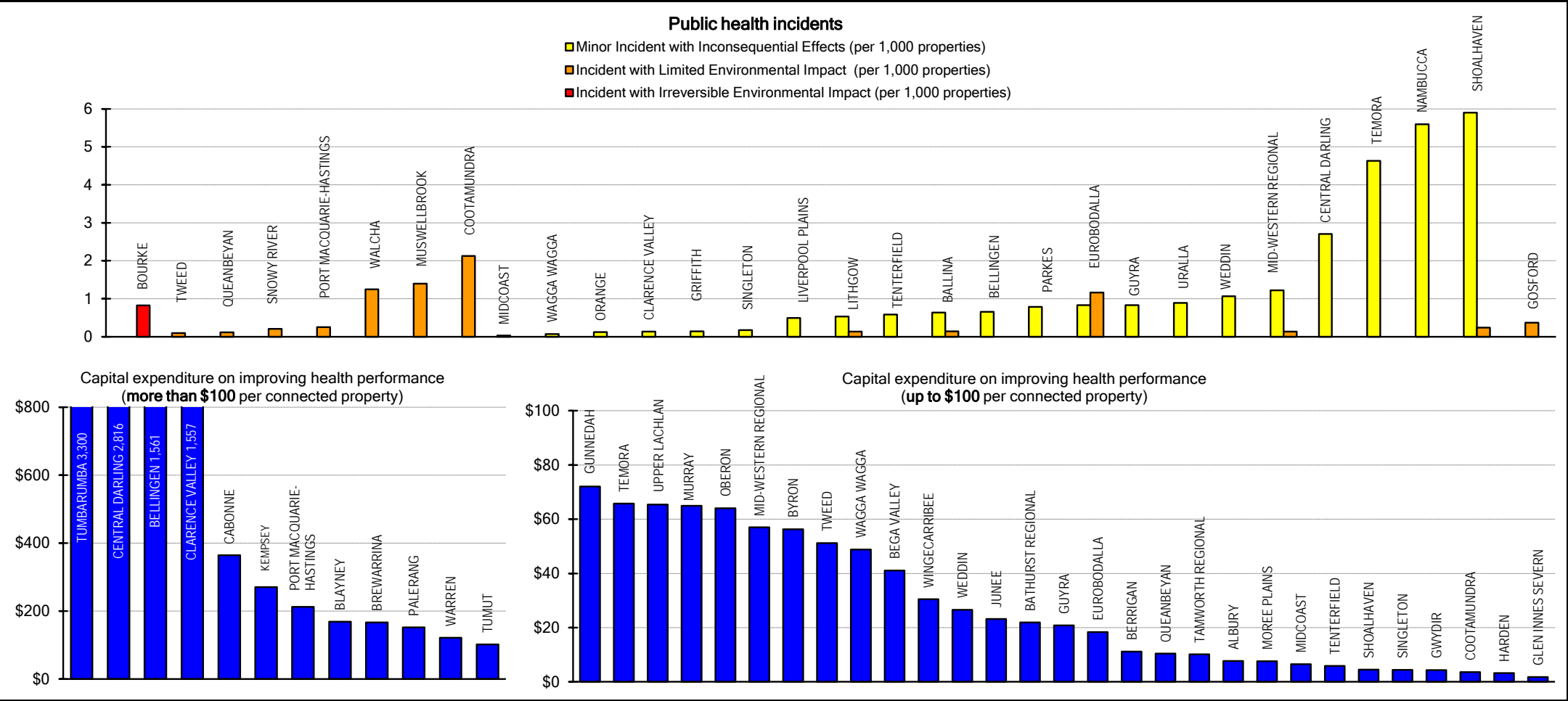
Figure 46: Sewerage coverage



Parameter: Population served (SB1)  
Population served (SB1) + unserved urban population (SB21)

- Notes:
1. This figure shows ranked values of the sewerage coverage for the urban population for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the sewerage coverage for the 27 LWUs shown ranges from 99.8% to 83%. Results for the previous 5 years are also shown.
  2. The 2014-15 Statewide median sewerage coverage was 97.9%.
  3. The sewerage coverage for the median LWU was 94%.
  4. The overall sewerage coverage for regional NSW was 96.3% of the urban population (ie. 1.74 million people). The systematic provision of backlog sewerage services for unsewered small towns under the NSW Government's Country Towns Water Supply and Sewerage Program has increased the sewerage coverage to 96.3% of the urban population, compared to 92.3% in 1996.
  5. For general notes see page 32.

Figure 47: Public health incidents, capital expenditure - sewerage



**Parameter:** Total No. of minor incidents with inconsequential effects (SB44)  
[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

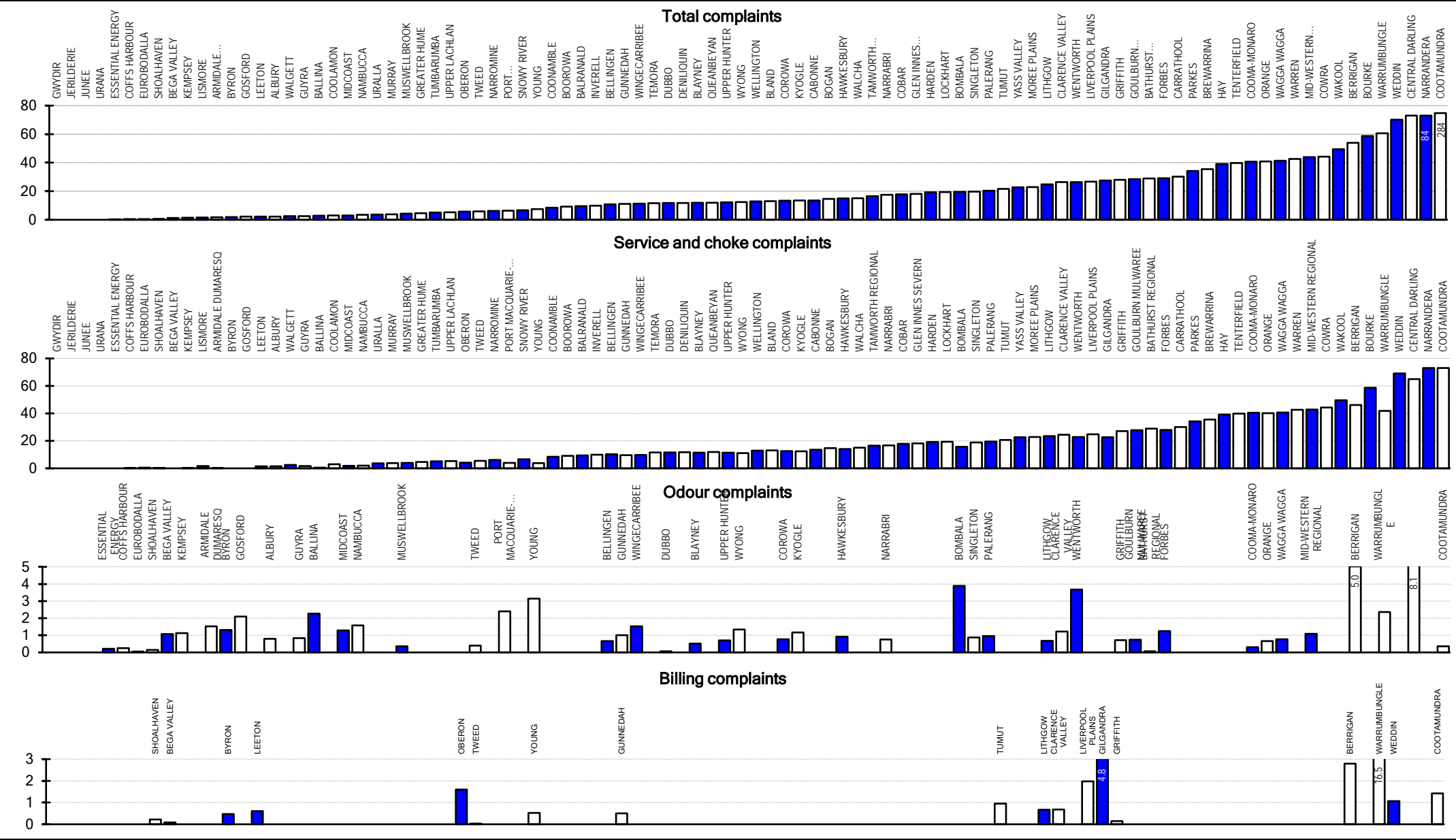
**Parameter:** Total No. of minor incidents with limited health impacts (SB45)  
[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

**Parameter:** Total No. of major incidents with major health impacts (SB46)  
[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

**Parameter:** Capital expenditure on improving health performance (\$) x (SB48)  
[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

- Notes:**
- 1. Lachlan, Richmond Valley, Wyong, Gundagai and Murrumbidgee did not report public health incidents. 30 Utilities reported incidents and are shown in the figure above, while 64 utilities reported zero health incidents.
  - 2. For general notes see page 32.

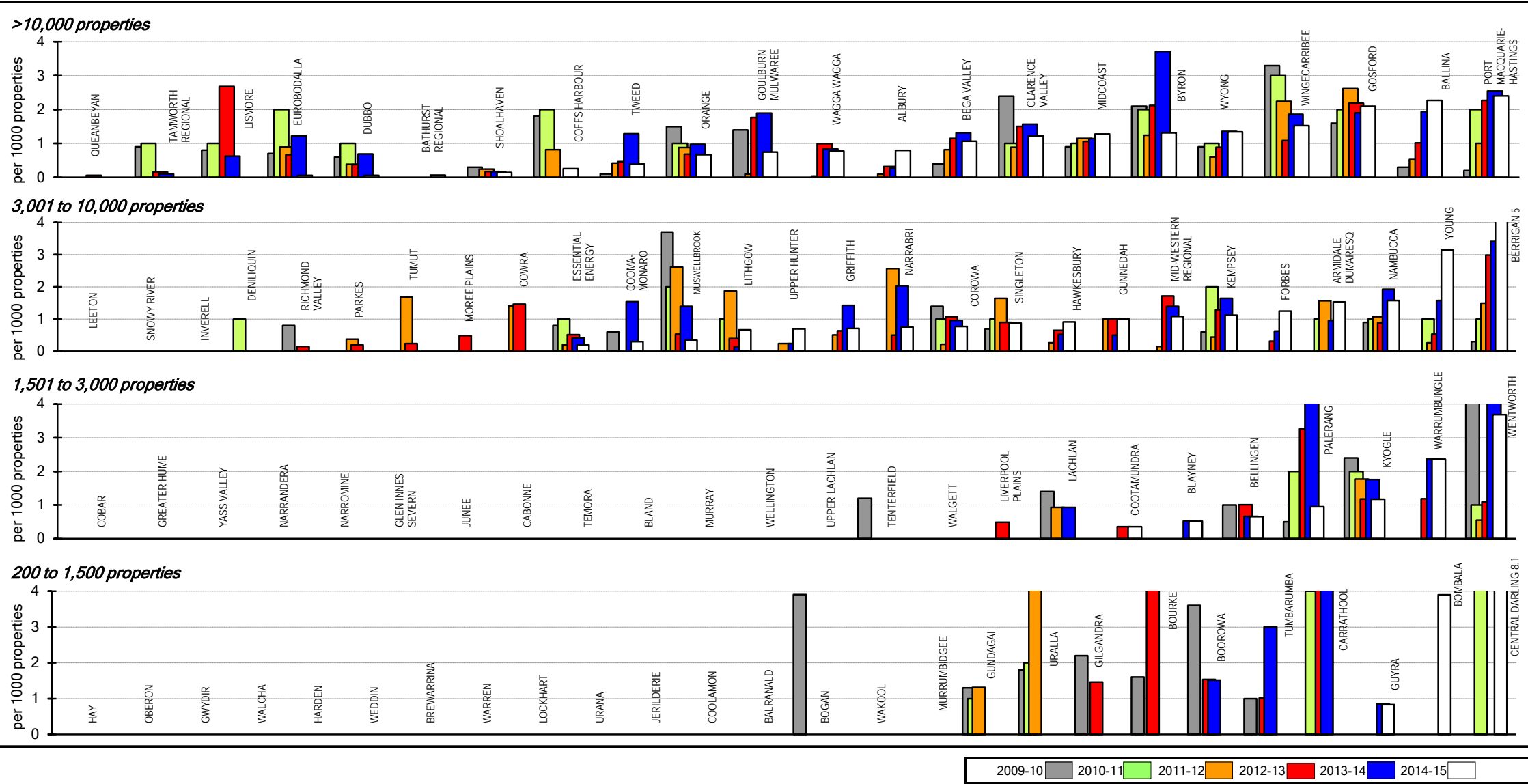
Figure 48: Complaints (per 1000 properties) - sewerage



Parameter: 
$$\frac{[\text{Total no. of complaints (SB34) + (SB37) + (SB38) + (SB39)] \times 1000}{[\text{No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] \times \text{No. of connected properties per assessment}}$$

Note: 1. For general notes see page 32. Refer also to Table 17 on page 198.

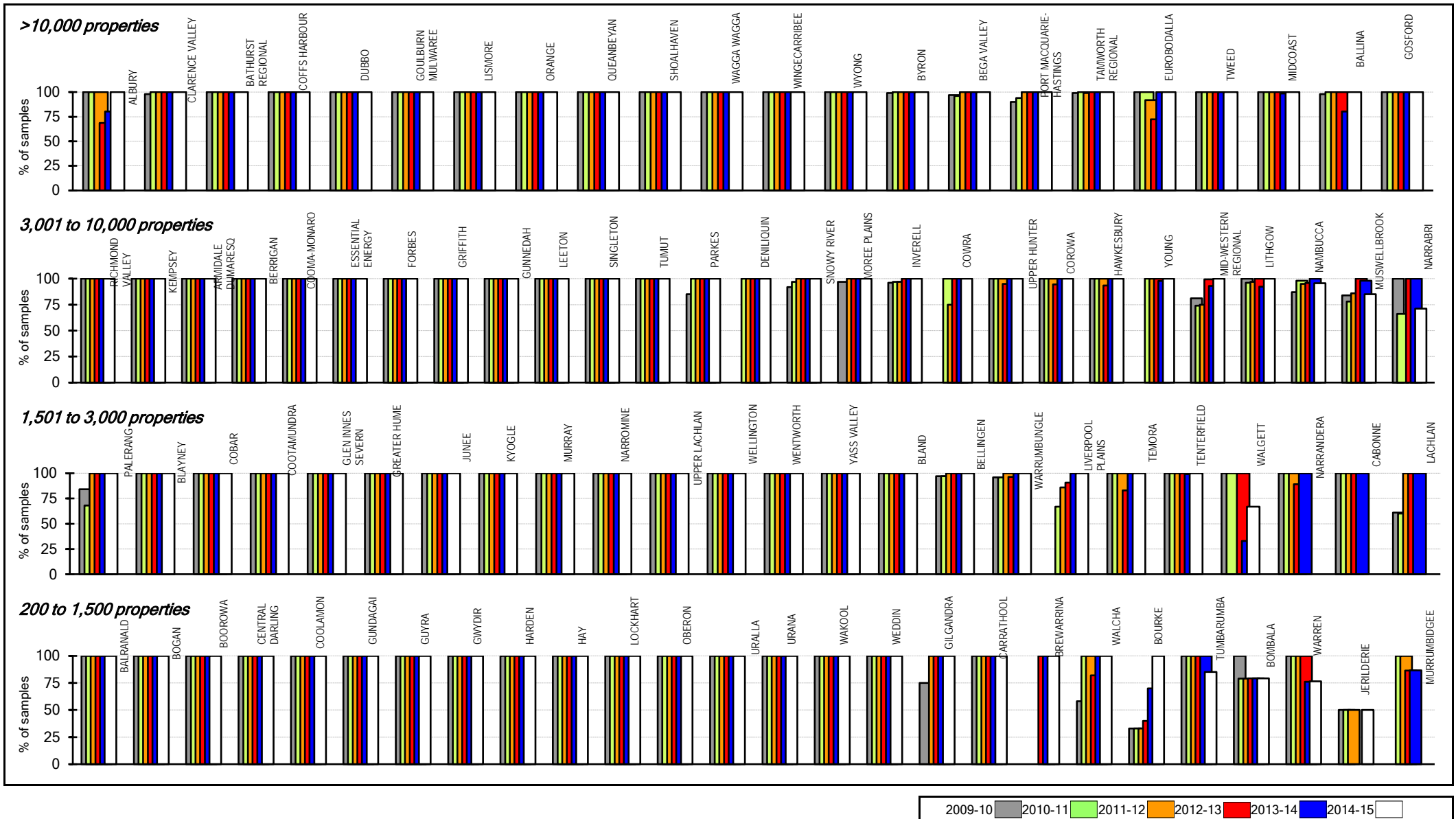
Figure 49: Odour complaints - sewerage



**Parameter:** [No. of Odour Complaints from Treatment Works and Pumping Stations (SB39) x 1000  
[No. of Residential Assessments (SB13) + No. of Non-Residential Assessments (SB14)] x No. of Connected Properties per Assessment

- Notes:**
1. This figure shows ranked values of the 2014-15 number of sewage odour complaints for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the number of odour complaints for the 27 LWUs shown ranges from 0 to 5 complaints per thousand connected properties. Results for the previous 5 years are also shown.
  2. This is a very important indicator for residents if the 'utility gets it wrong' and there are widespread sewage odour complaints in its area. The above results indicate that this has not been the case in regional NSW, where over the last 6 years, odour complaints have rarely exceeded 5 per thousand connected properties.
  3. The 2014-15 Statewide median number of odour complaints is 0.8 per 1000 properties. Refer also to Table 17 on page 198, graph 11 on page 207 and figure 21 on page 114.
  4. For general notes see page 32.

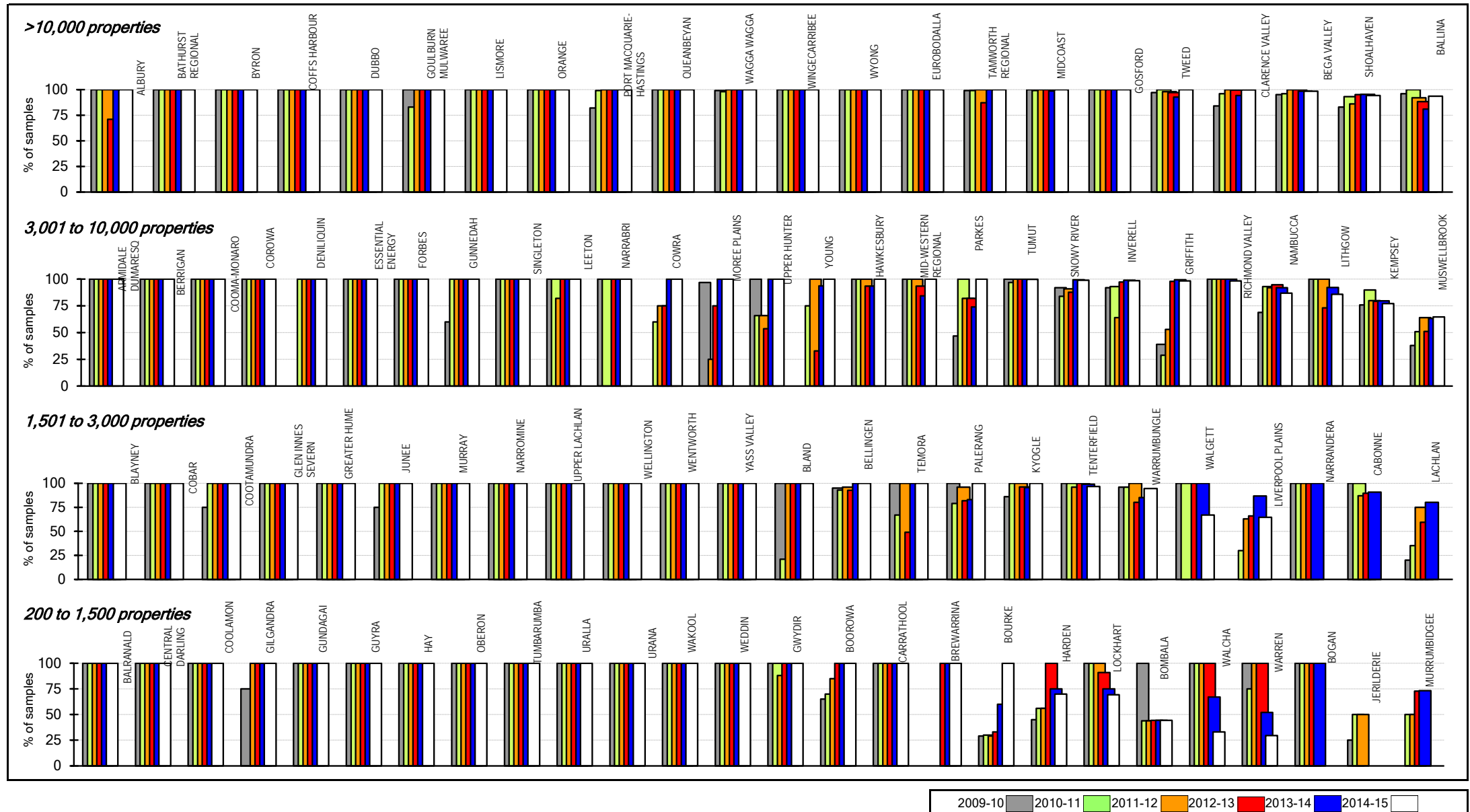


**Figure 50: Compliance with BOD in licence - sewerage**

**Parameter:** Percentage of samples complying with 90 percentile Environment Protection Authority (EPA) licence limits for Biochemical Oxygen Demand (BOD) (ST50)

**Note:**

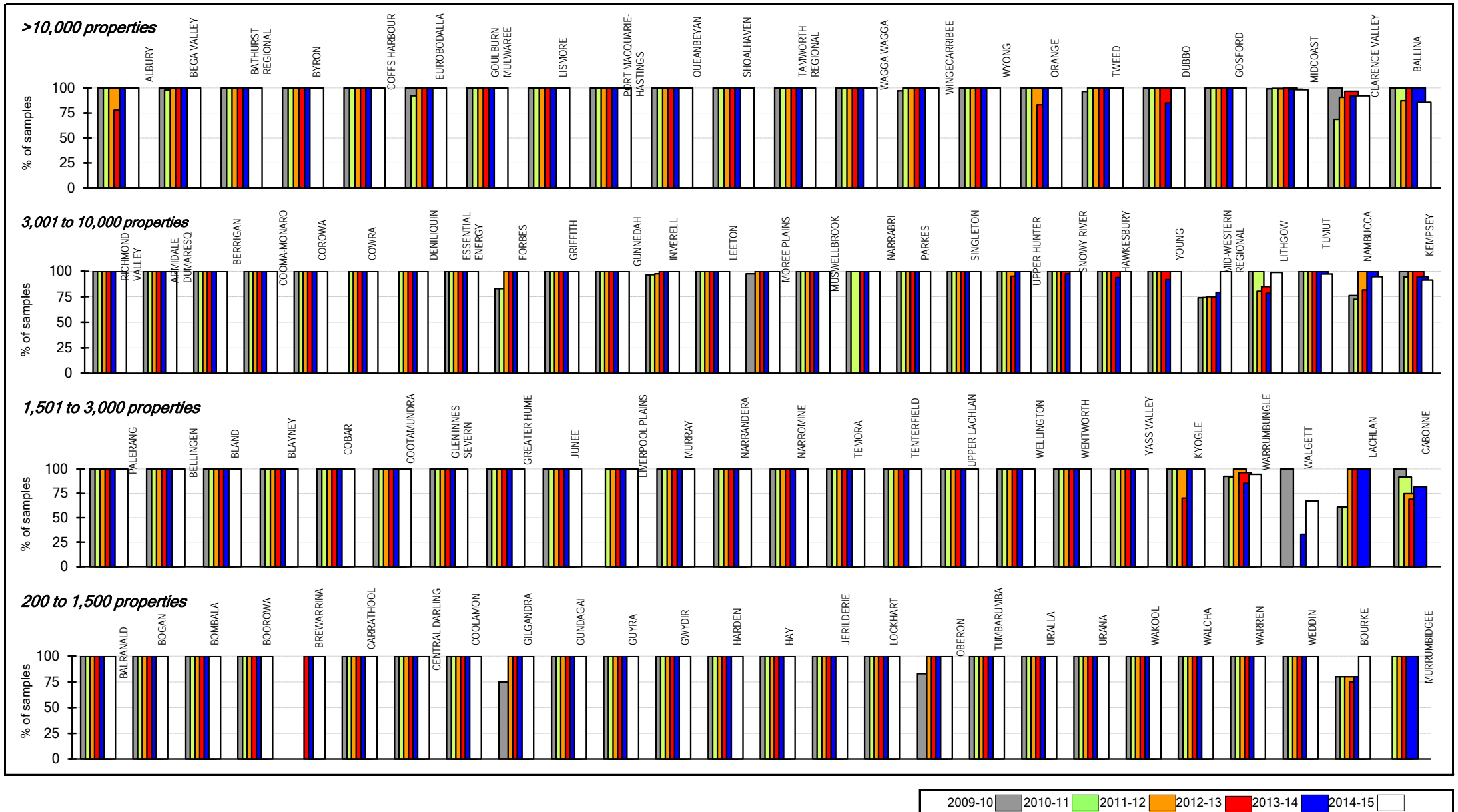
1. Refer also to Table 17 on page 198 and graph 18 on page 209.
2. For general notes see page 32.

**Figure 51: Compliance with SS in licence - sewerage**

**Parameter:** Percentage of samples complying with 90 percentile Environment Protection Authority (EPA) licence limits for Suspended Solids (SS) (ST52)

**Note:**

1. Refer also to Table 17 on page 198 and graph 18 on page 209.
2. For general notes see page 32.

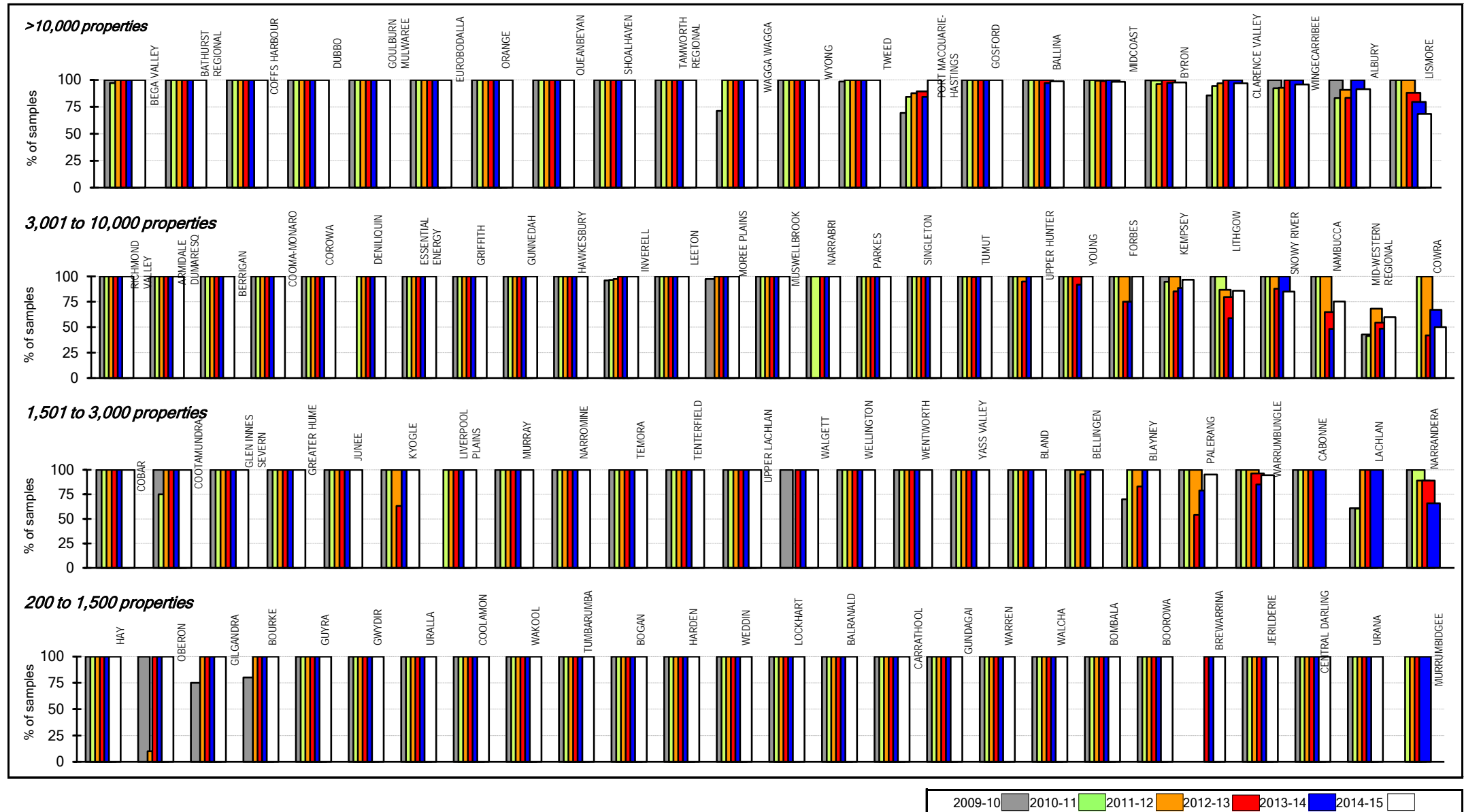
**Figure 52: Compliance with N in licence - sewerage**

**Parameter:** Percentage of samples complying with 90 percentile Environment Protection Authority (EPA) licence limits for Total Nitrogen (ST54)

**Note:**

1. Refer also to Table 17 on page 198.
2. For general notes see page 32.

Figure 53: Compliance with P in licence - sewerage

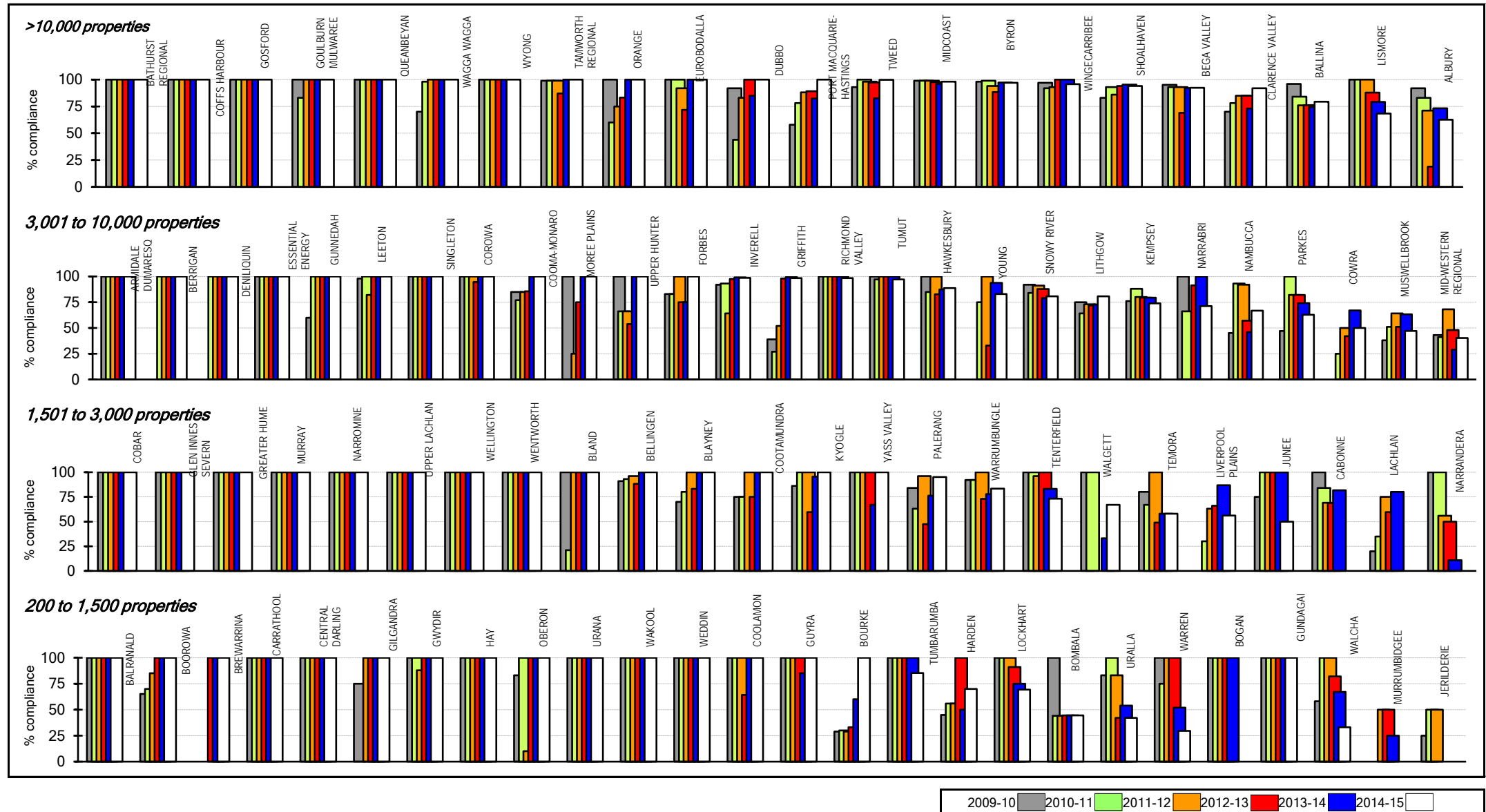


**Parameter:** Percentage of samples complying with 90 percentile Environment Protection Authority (EPA) licence limits for Total Phosphorus (ST60)

**Note:**

1. Refer also to Table 17 on page 198.
2. For general notes see page 32.

Figure 54: Percent of sewage volume treated that was compliant - sewerage - E4

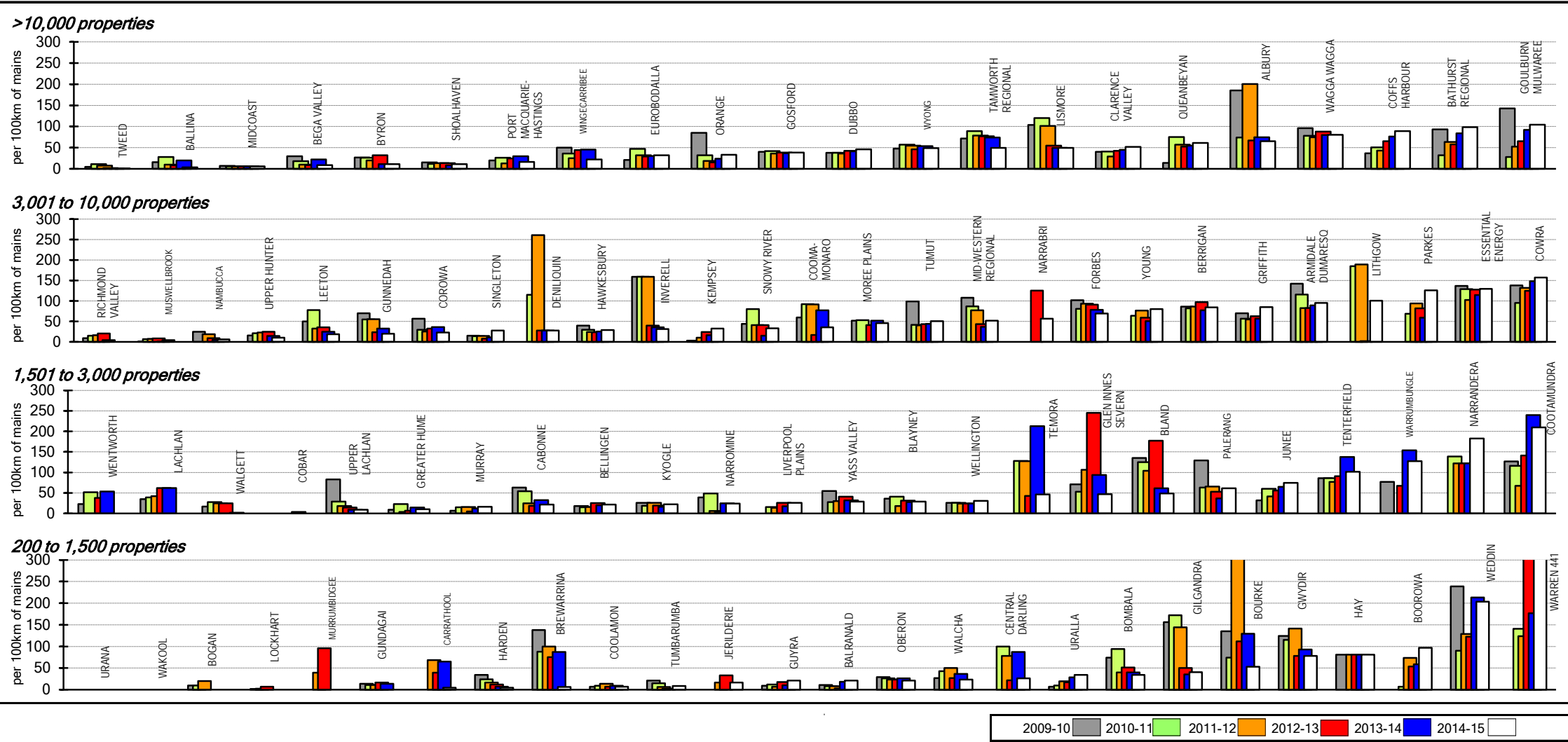


**Parameter:**  $\frac{(\text{No. of scheduled samples complying with all of the licence limits}) \times 100}{\text{Total No. of scheduled samples in reporting period}}$

**Note:**

1. Refer also to Table 17 on page 198, graph 21 on page 210 and figure 18 on page 113.
2. For general notes see page 32.

Figure 55: Sewerage main breaks and chokes - sewerage - A14

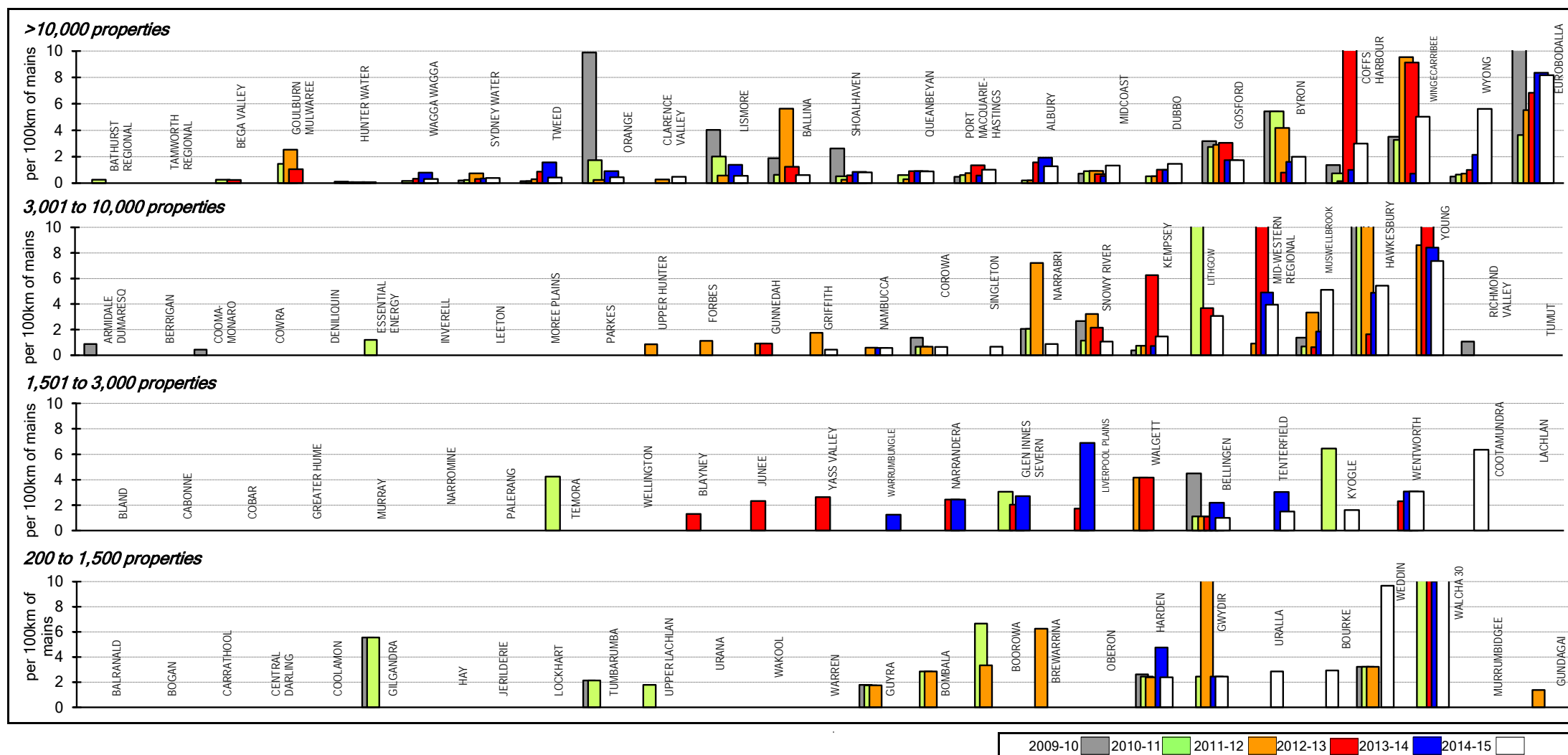


**Parameter:**  $\frac{\text{Total No. of Sewerage Main Breaks and Chokes [(SB64) + (SB65)] \times 100}{\text{Length of Reticulation/Gravity Mains (SB7) + Length of Rising Mains (SB8)}}$

- Notes:**
1. This figure shows ranked values of the 2014-15 sewerage main breaks and chokes for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewerage main breaks and chokes for the 26 LWUs shown ranges from 5 to 157 chokes per 100 km of sewer mains. Results for the previous 5 years are also shown.
  2. Note NWI Indicator A14 (sewerage main breaks and chokes) was revised in 2009/10 to exclude property connection sewer breaks and chokes which were previously included in this indicator. The results shown for 2008/09 are based on the previous definition which includes property connections sewer breaks and chokes.
  3. The Statewide median sewerage main breaks and chokes is 36 per 100 km of sewer mains, which is significantly higher than the National Median of 17. The NSW median has fallen from 75 to 36 over the past 23 years, partly as a result of revision of the national definition for this indicator in 2009-10. Refer also to Table 5 on page 116, Table 15 on page 192, graph 20 on page 210 and figure 36 on page 113.
  4. For general notes see page 32.



Figure 56: Sewer overflows reported to environmental regulator - sewerage - E13

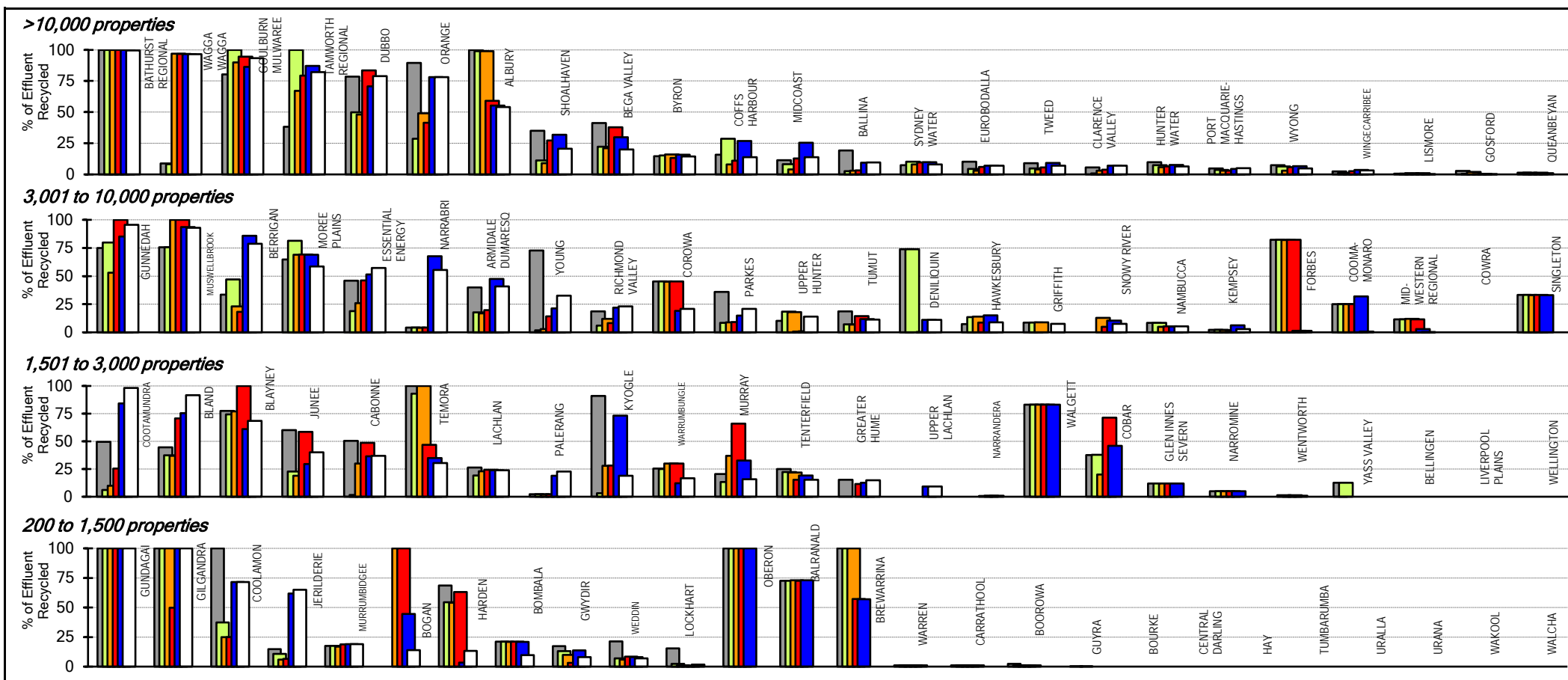


**Parameter:**  $\frac{\text{Total No. of Sewage Overflows Reported to Regulator (SB63b)} \times 100}{\text{Length of Reticulation/Gravity Mains (SB7) + Length of Rising Mains (SB8)}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 overflows reported to the environmental regulator for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 overflows reported to the environmental regulator for the 24 LWUs shown ranges from nil to 7 overflows per 100 km of sewer mains. The 3 utilities on the right did not report this indicator for 2014-15. Results for the previous 5 years are also shown.
2. The Statewide median sewer overflows reported to the environmental regulator is 0.9 per 100 km of sewer mains [National Median is 0.5 per 100 km of sewer mains]. Refer also to Table 15 on page 192, graph 23 on page 210 and figure 37b on page 113.
3. 54% of reporting LWUs had no sewer overflows reported to the environmental regulator.
4. For general notes see page 32.

Figure 57: Recycled water (% of effluent recycled) - sewerage - W27



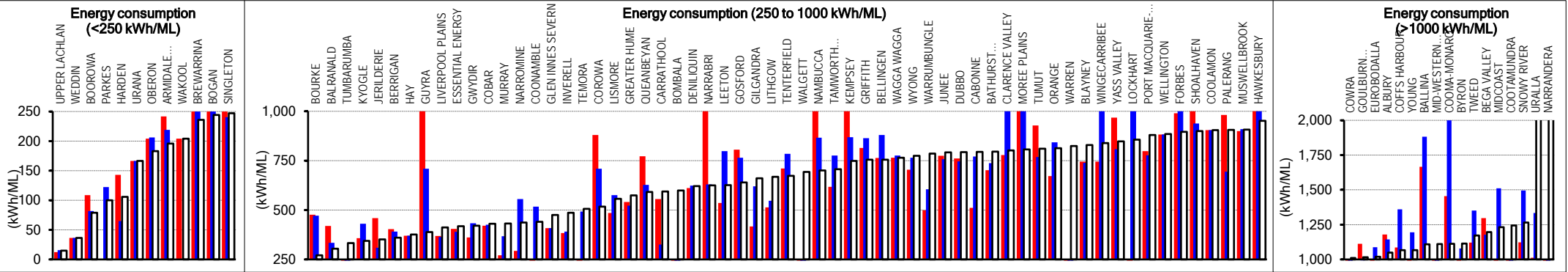
Parameter:

Total Volume Recycled (WB158) x 100  
Volume of Sewage Treated (Secondary Treatment) (STT18)

## Notes:

1. This figure shows ranked values of the 2014-15 recycled water (% of sewage effluent recycled) for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 recycled water (% of sewage effluent recycled) for the 27 LWUs shown ranges from 96% to 0%.
2. The 2013-14 result has been adopted for any LWUs that did not report historically consistent effluent reuse (generally >25%). These LWUs are shown in *italics bold* in Table 15 on page 192 and Table 5 on page 116.
3. The Statewide median reuse of recycled water is 10% of effluent recycled.
4. The total volume of recycled water for regional NSW was 39,000 ML, which was 22% of the total volume of sewage collected [National Median is 15%]. Re-use was carried out by 70% of LWUs. 20% of LWUs recycled over 50% of their effluent.
5. Refer also to Table 5 on page 116, Table 15 on page 192, graph 16 on page 209, figure 27 on page 114 and to pages 10 and 19 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).
6. For general notes see page 32.

Figure 58: Energy consumption per ML - sewerage

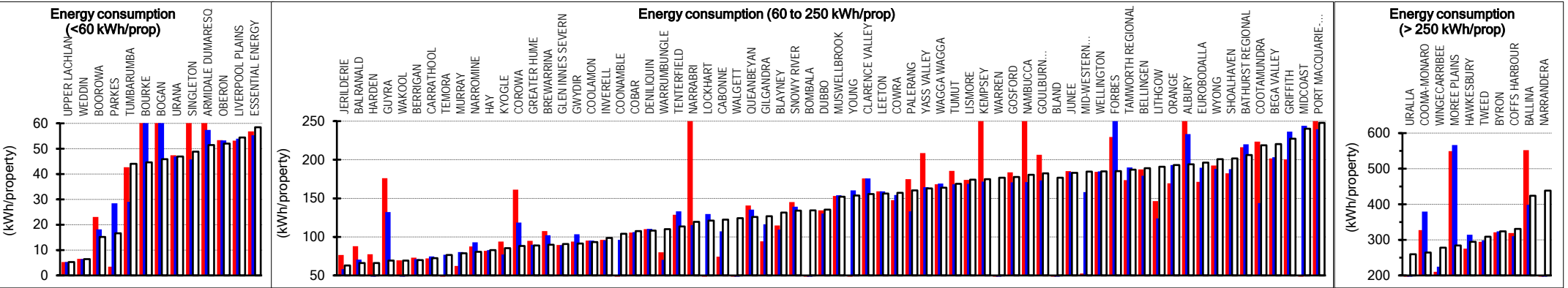


Parameter:  $\frac{\text{Total Energy Usage (SB79) } \times 1000}{\text{Total Volume of Sewage Collected (ST15)}}$

2012-13 2013-14 2014-15

- Notes:
- 1. This figure shows ranked values of the 2014-15 total energy consumption per ML. The energy consumption per ML for the 90 Local Water Utilities (LWUs) shown range from about 15 to 2500 kWh per connected property. Results for the previous 2 years are also shown.
  - 2. For general notes see page 32.

Figure 59: Energy consumption per property - sewerage

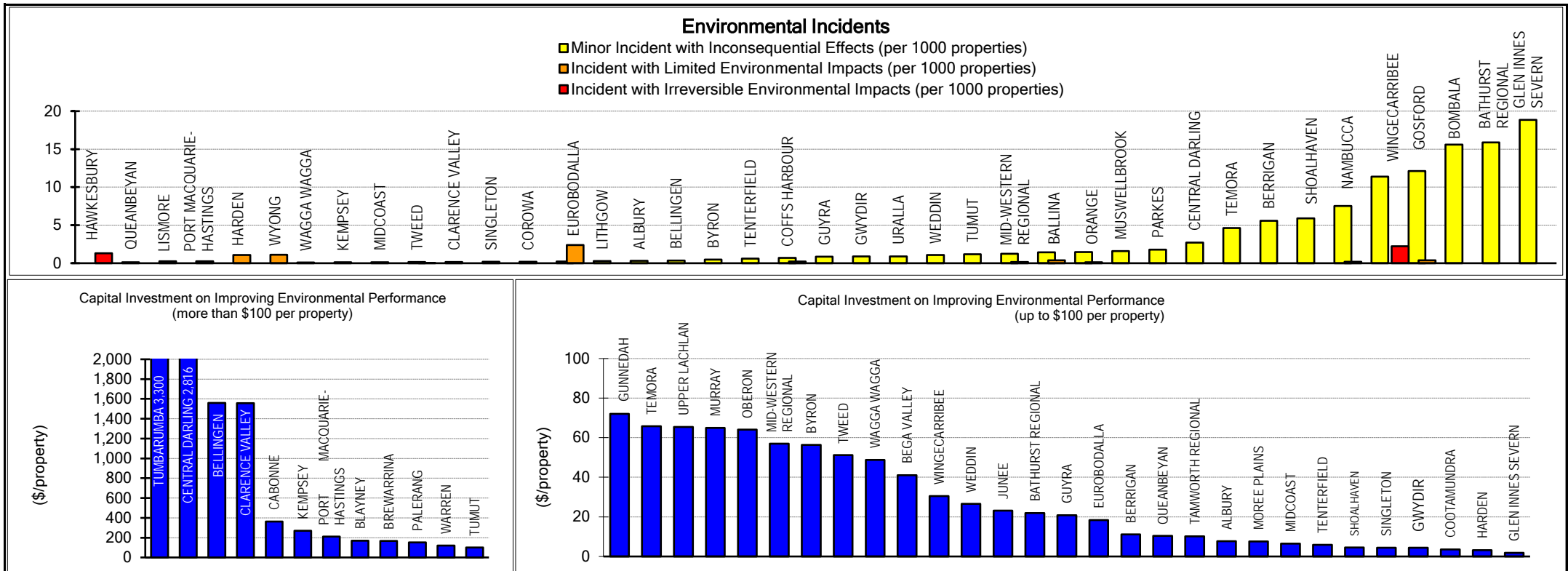


Parameter:  $\frac{\text{Total Energy Usage (SB79) } \times 1000}{[\text{No. of Residential Assessments (SB13) } + \text{No. of Non-Residential Assessments (SB14)}] \times \text{No. of Connected Properties per Assessment}}$

2012-13 2013-14 2014-15

- Notes:
- 1. This figure shows ranked values of the 2014-15 total energy consumption per connected property. The energy usage per connected property for the 91 Local Water Utilities (LWUs) shown range from about 5 to 440 kWh per connected property. Results for the previous 2 years are also shown.
  - 2. For general notes see page 32.

**Figure 60: Environmental incidents, management systems, capital investment - sewerage**

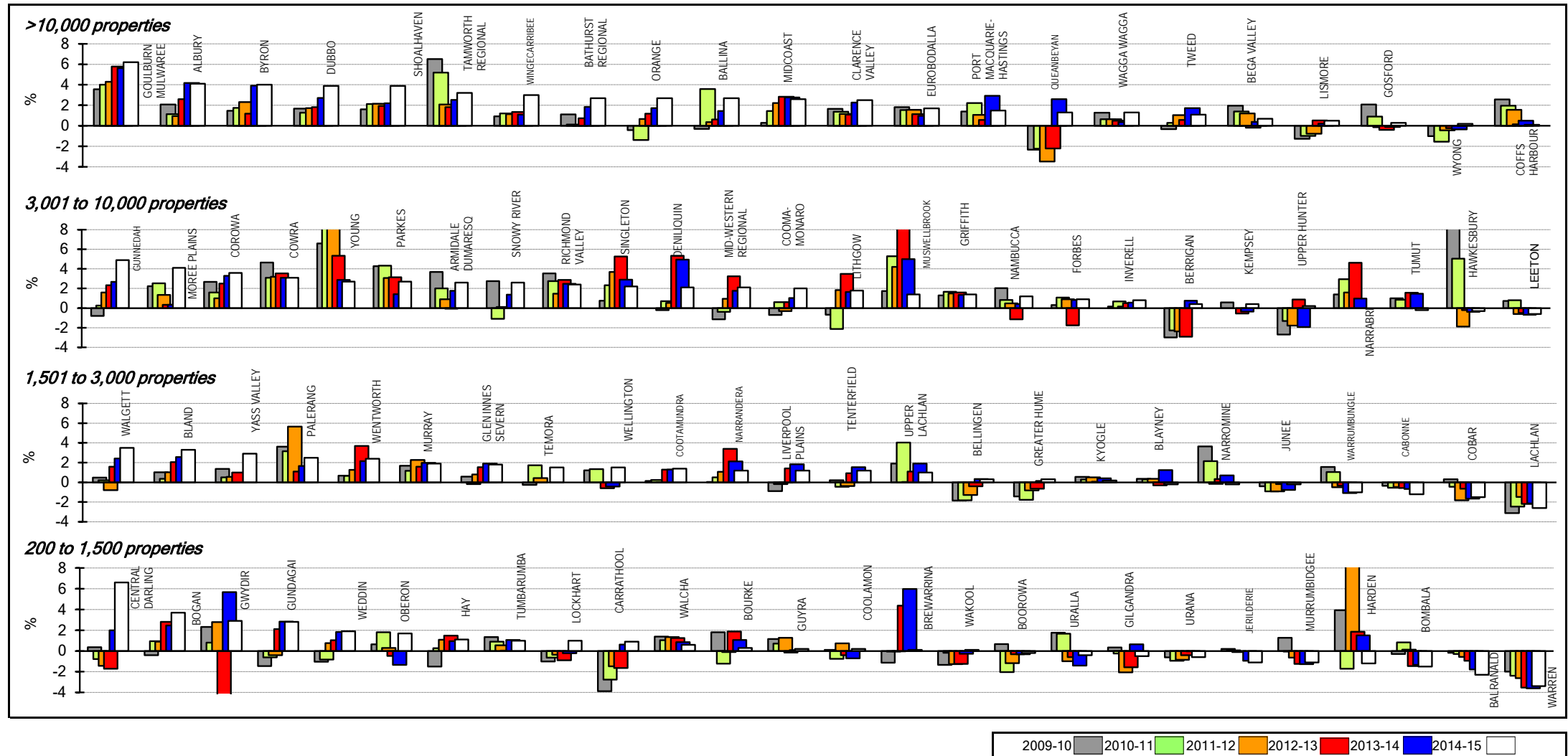


|                   |  |
|-------------------|--|
| <b>Parameter:</b> | <u>Total number of minor incidents with inconsequential effects (SB69)</u>   |
|                   | [No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment |
| <b>Parameter:</b> | <u>Total number of incidents with limited enviromental impacts (SB70)</u>  |
|                   | [No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment |
| <b>Parameter:</b> | <u>Total number of incidents with irreversible enviromental impacts (SB71)</u>   |
|                   | [No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment |
| <b>Parameter:</b> | <u>Capital expenditure on improving environmental performance (\$) (SB76)</u>  |
|                   | [No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment |

**Notes:**

1. The following 4 utilities did not report for environmental incidents: Lachlan, Richmond Valley, Gundagai and Murrumbidgee. 40 utilities reported and are shown in the figure above, while 56 utilities reported zero environmental incidents.
2. The following 52 LWUs have prepared a sewerage Environmental Management Plan:  
Ballina, Balranald, Bathurst, Bellingen, Berrigan, Blayney, Bogan, Bombala, Brewarrina, Byron, Cabonne, Carrathool, Coffs Harbour, Coonamble, Corowa, Dubbo, Glen Innes Severn, Gosford, Greater Hume, Gunnedah, Guyra, Junee, Kempsey, Kyogle, Lachlan, Leeton, Lismore, Liverpool Plains, MidCoast, Moree Plains, Murray, Murrumbidgee, Muswellbrook, Narrabri, Narrandera, Narromine, Oberon, Parkes, Queanbeyan, Shoalhaven, Sydney Water, Tamworth, Temora, Tumbarumba, Tweed, Upper Hunter, Uralla, Wagga Wagga, Wakool, Walcha, Walgett, Weddin.
3. For general notes see page 32.

Figure 61: Economic real rate of return - sewerage - F18

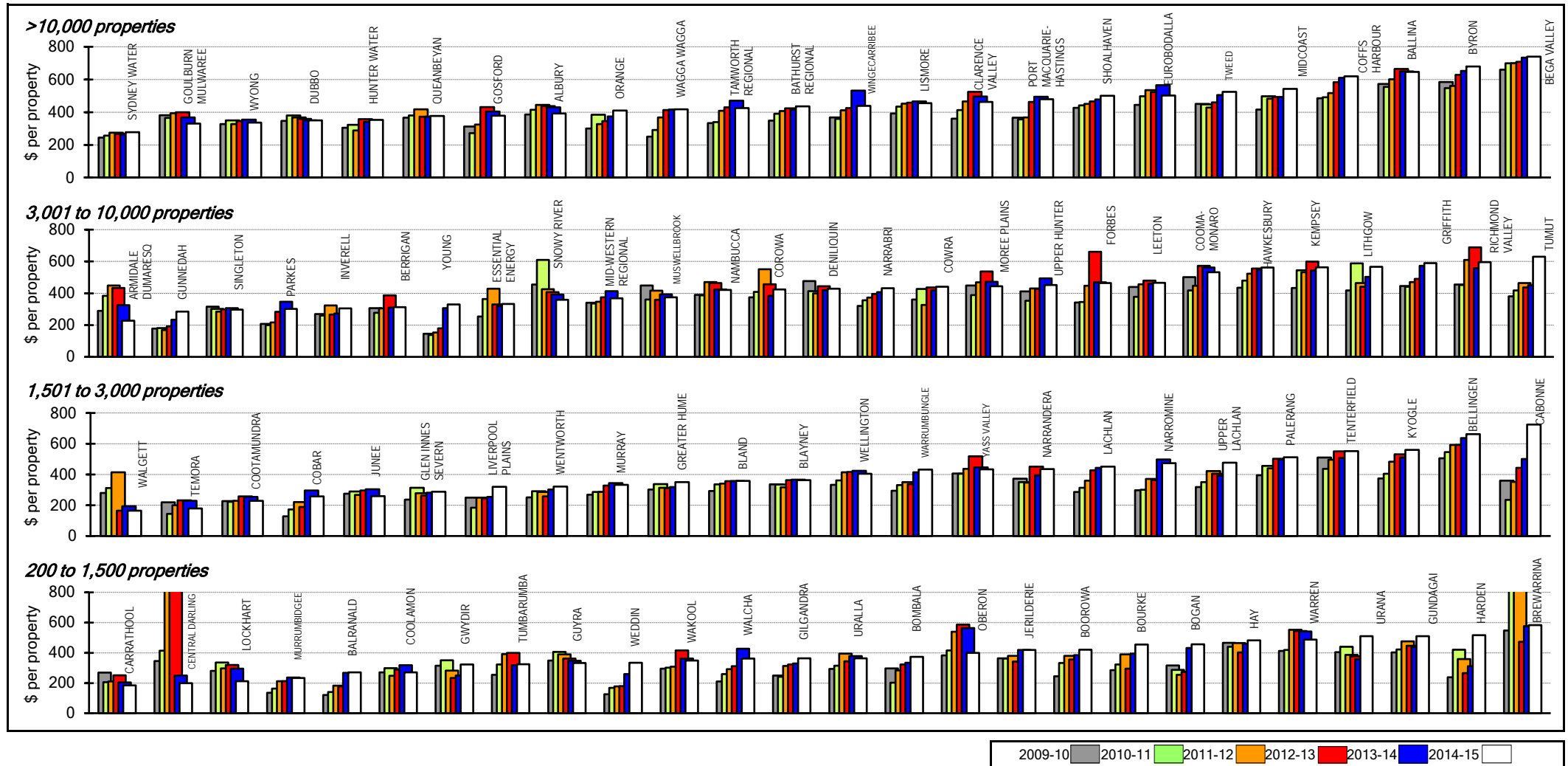


**Parameter:** 
$$\frac{[\text{Operating Result (S}_{16}\text{)} + \text{Interest Expense (S}_{4a}\text{)} - \text{Interest Income (S}_{10}\text{)} - \text{Grants for Acquisition of Assets (S}_{12a}\text{)}] \times 100}{\text{Written Down Replacement Cost of System Assets, Plant \& Equipment (S}_{34}\text{)}}$$

**Notes:**

1. This figure shows ranked values of the 2014-15 sewerage economic real rate of return (ERRR) for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewerage real rate of return for the 26 LWUs shown ranges from 4.9% to -0.6%. Results for the previous 5 years are also shown.
2. The Statewide median sewerage ERRR is 1.7% [National Median is 3%]. Refer also to page 26, Table 5 on page 116, Table 7 on page 146 and figure 46 on page 113.
3. The ERRR includes developer provided assets and capital contributions from other LWUs.
4. For general notes see page 32.

Figure 62: Operating cost (OMA) per property - sewerage - F12



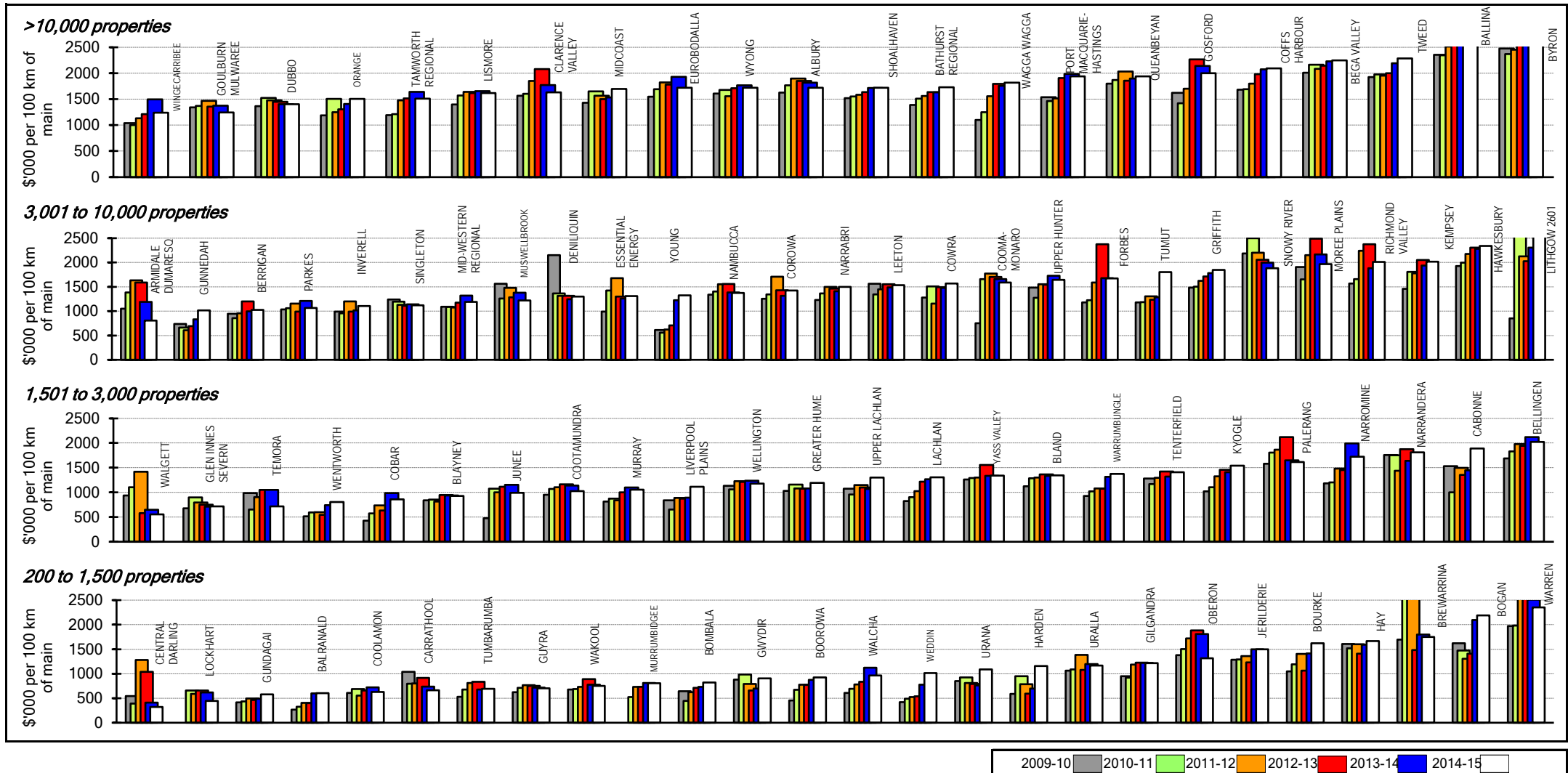
**Parameter:**  $\frac{\text{Management Expenses (S}_1\text{)} + \text{Total Operations Expenses (S}_2\text{)} - \text{Purchase of Water} + \text{Bulk Supplier's OMA}}{[\text{No. of residential assessments (SB13)} + \text{No. of non-residential assessments (SB14)}] \times \text{No. of connected properties per assessment}}$

[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

#### Notes:

1. This figure shows ranked values of the 2014-15 water supply operating cost (OMA - operation, maintenance and administration) per property for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the operating costs for the 27 LWUs shown ranges from \$227 to \$630 per connected property. Results for the previous 5 years are also shown.
2. The Statewide median operating cost per connected property is \$420 [National Median is \$400]. Refer also to Table 5 on page 116, Table 16 on page 195, graph 26 on page 211, figure 50 on page 115 and pages 21, 23 and 27.
3. For general notes see page 32.



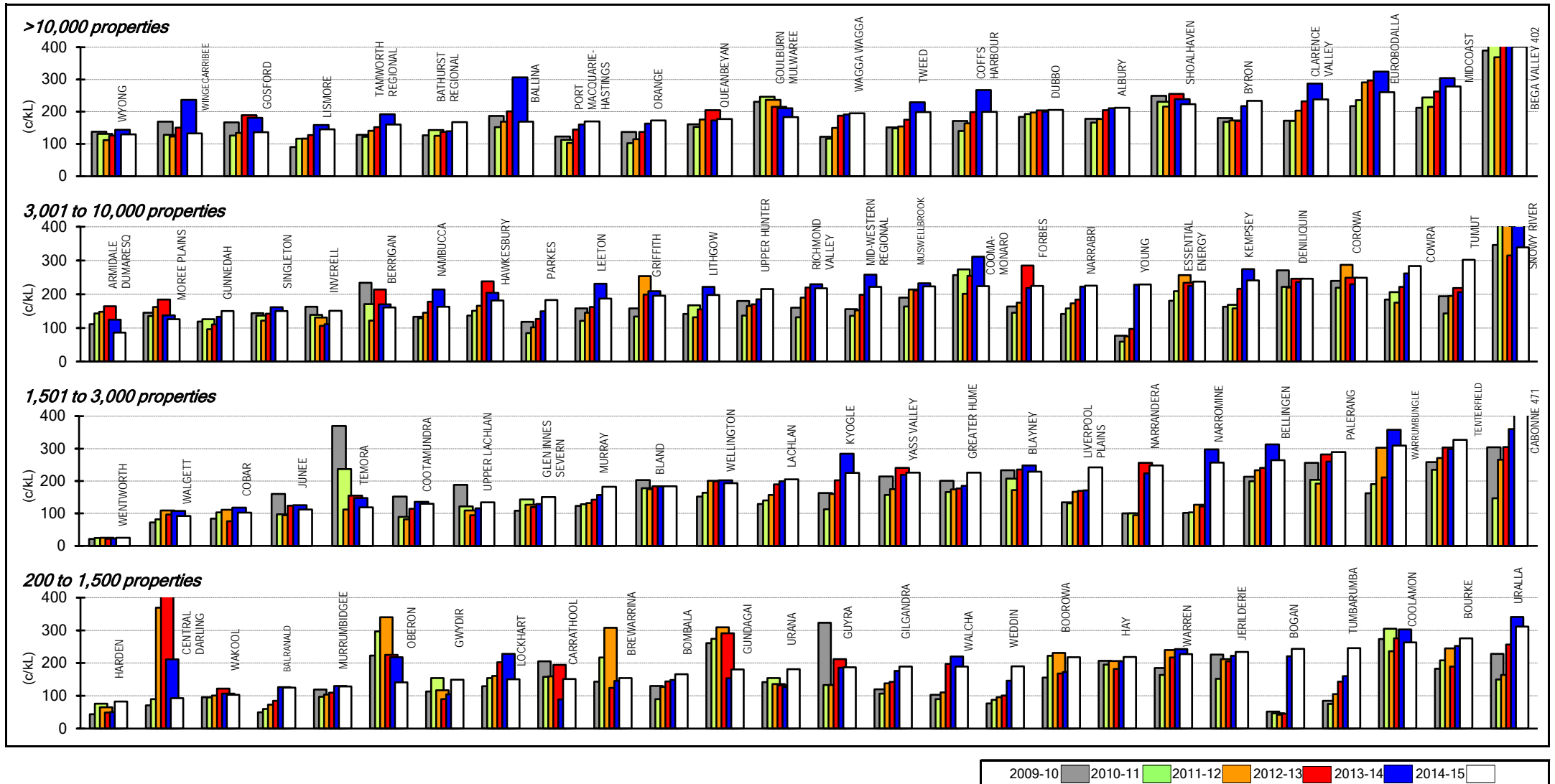
**Figure 63: Operating cost (OMA) per 100 km of main - sewerage**

**Parameter:**  $\frac{\text{Management Expenses (S\_1) + Total Operations and Maintenance Expenses (S\_2)}}{[\text{Length of Reticulation Mains (SB7) + Length of Rising Mains (SB8)] \times 10}$

**Notes:**

1. This figure shows ranked values of the 2014-15 sewerage operating cost (OMA - operation, maintenance and administration) per 100 km of main for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the sewerage operating costs for the 27 LWUs shown ranges from \$0.81M to \$2.6M per 100 km of sewer main. Results for the previous 5 years are also shown.
2. The Statewide median operating cost is \$1.72M per 100 km of sewer main. Refer also to Table 16 on page 195 and Table 18 on page 201.
3. For general notes see page 32.

Figure 64: Operating cost (OMA) per kL - sewerage



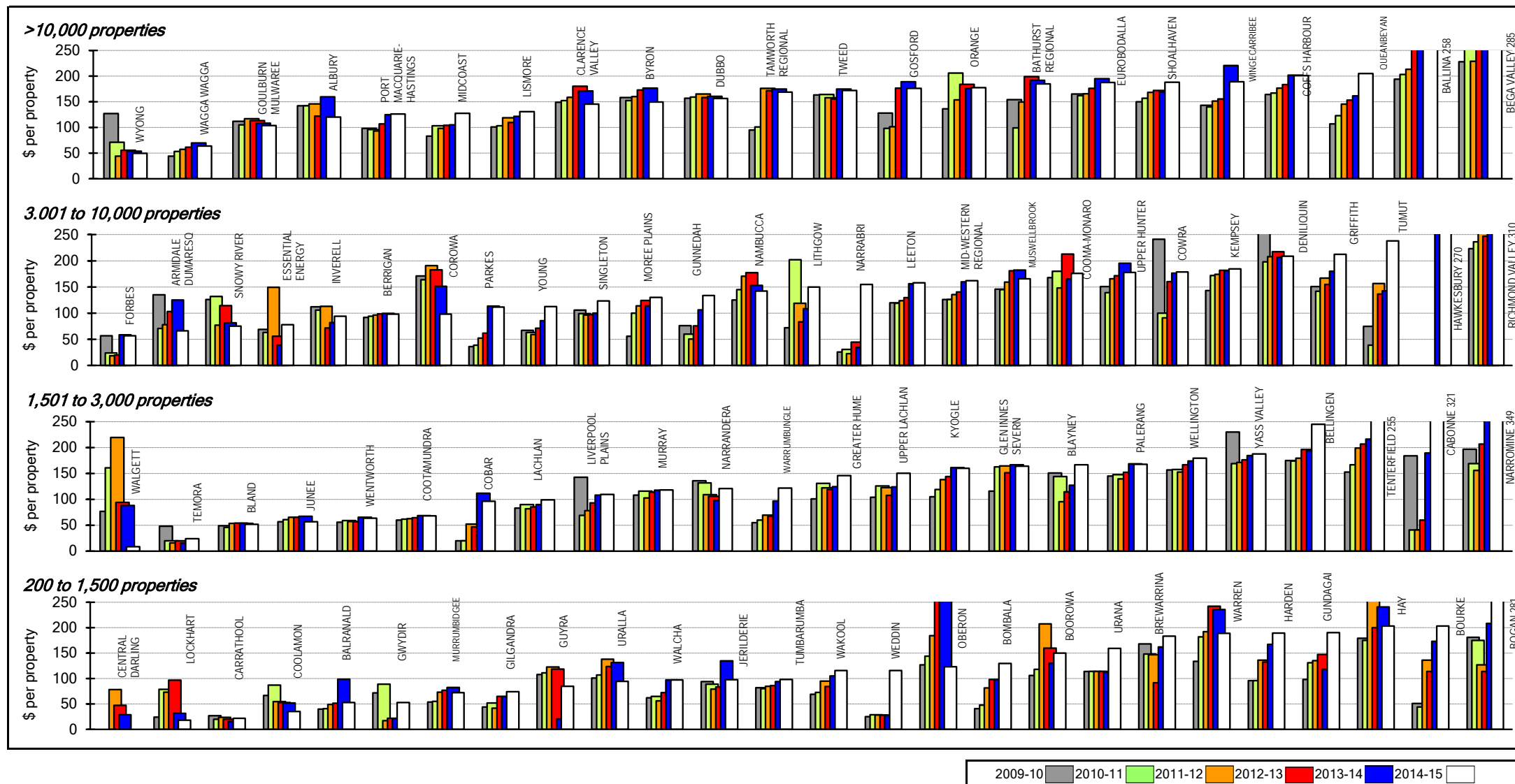
Parameter: Management Expenses (S\_1) + Total Operations and Maintenance Expenses (S\_2)

Volume of Sewage Treated (Secondary Treatment) (ST18) x 10

#### Notes:

1. This figure shows ranked values of the 2014-15 sewerage operating cost (OMA - operation, maintenance and administration) per 100 km of main for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the sewerage operating costs for the 27 LWUs shown range from 87c/kL to 339c/kL. Results for the previous 5 years are also shown.
2. The Statewide median operating cost is 194c/kL. Refer also to Table 7 on page 146.
3. For general notes see page 32.

Figure 65: Management cost per property - sewerage



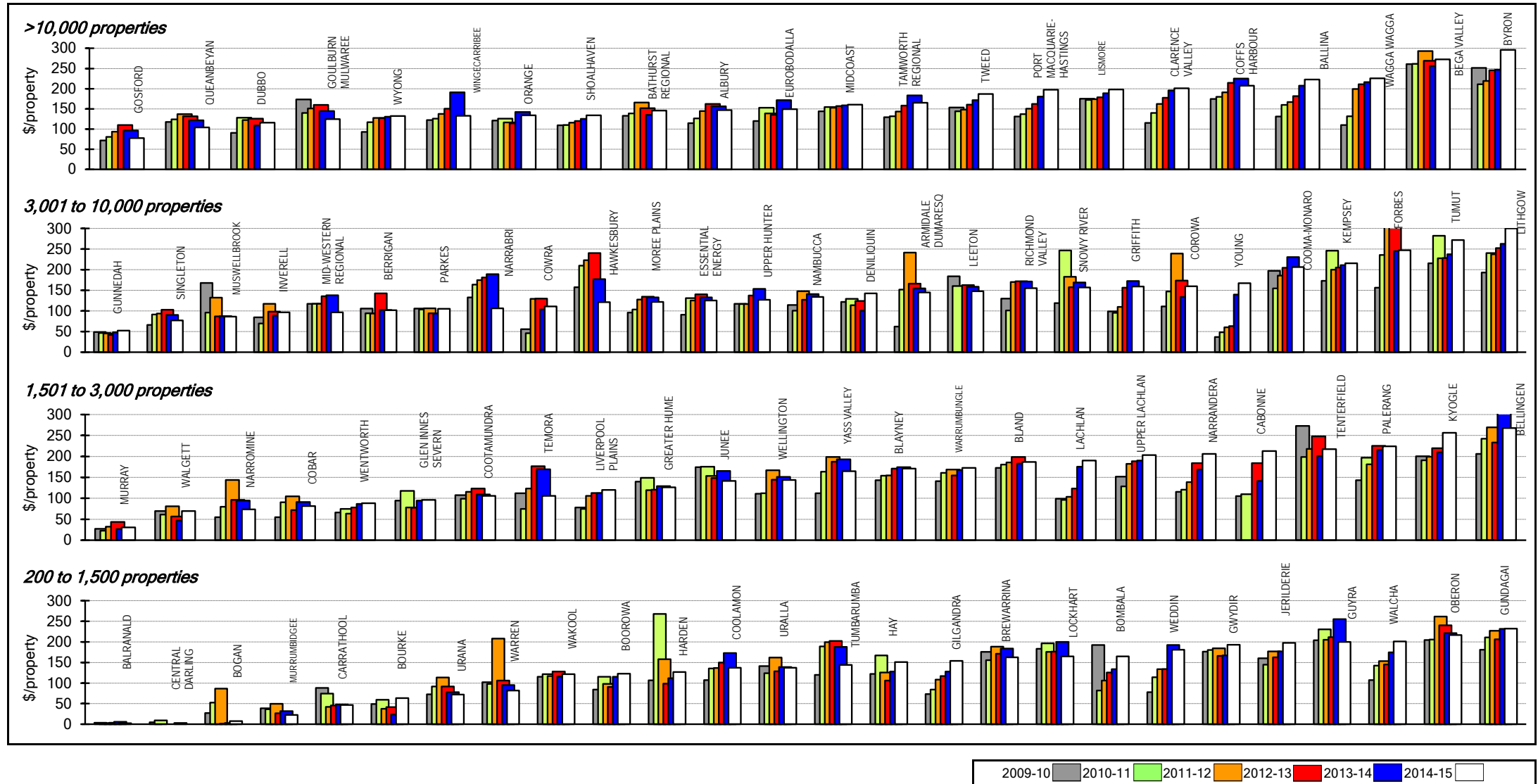
Parameter: Administration cost (S\_1a) + engineering cost (S\_1b)

[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

#### Notes:

1. This figure shows ranked values of the 2014-15 water supply management cost per property for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 management costs for the 26 LWUs shown ranges from \$57 to \$310. Results for the previous 5 years are also shown.
2. The Statewide median management cost is \$160 per connected property. Refer also to page 27 and Table 16 on page 195.
3. For general notes see page 32.

Figure 66: Treatment cost - sewerage

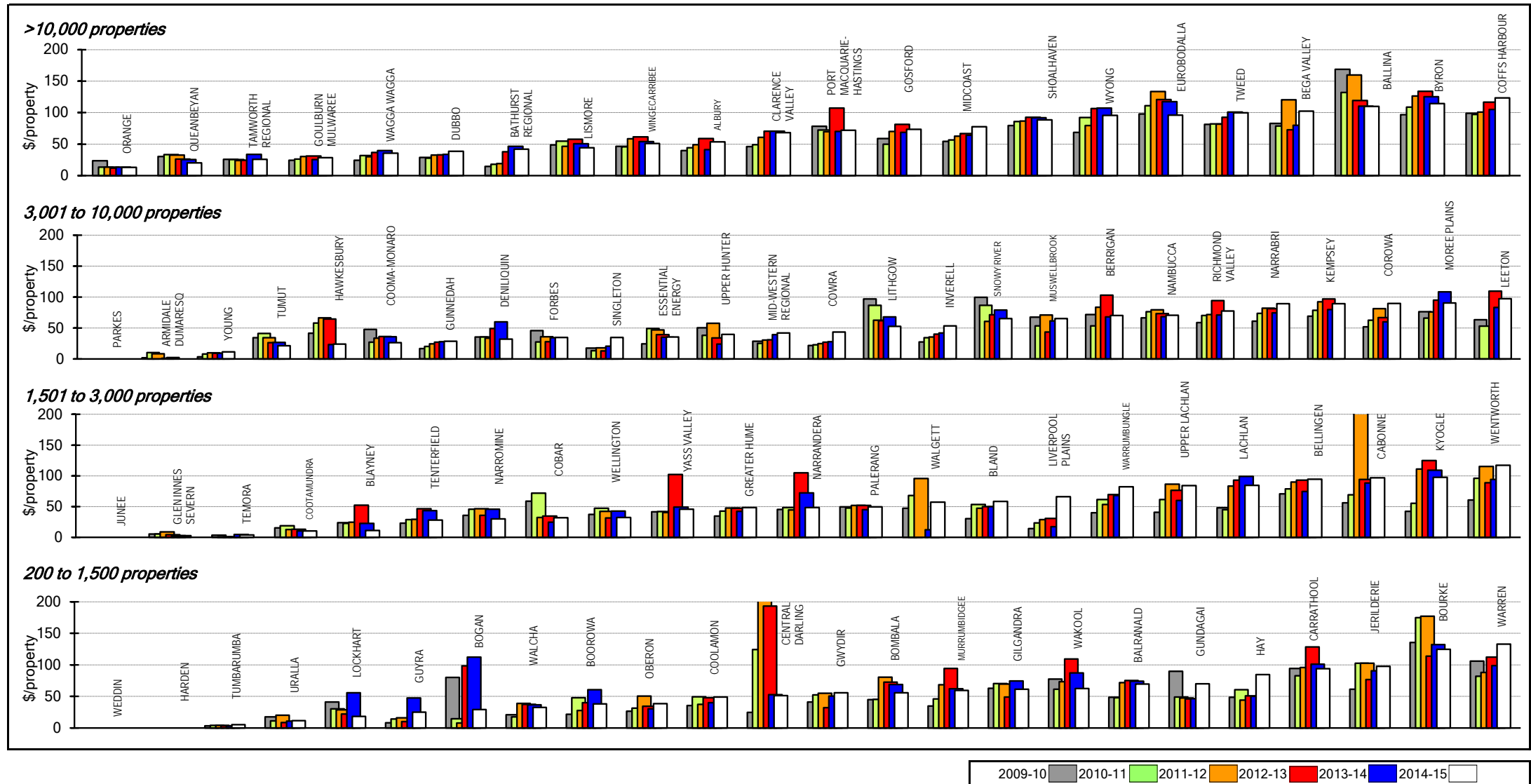


**Parameter:**  $\frac{\text{Treatment Operation Expenses (S\_2f)} + \text{Treatment Chemical Cost (S\_2g)} + \text{Energy Cost (S\_2h)} + \text{Treatment Maintenance Expenses (S\_2k)}}{[\text{No. of residential assessments (SB13)} + \text{No. of non-residential assessments (SB14)}] \times \text{No. of connected properties per assessment}}$

**Notes:**

1. This figure shows ranked values of the 2014-15 sewerage treatment cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewerage treatment cost for the 27 LWUs shown ranges from \$50 to \$300 per connected property. Results for the previous 5 years are also shown.
2. The Statewide median sewage treatment cost is \$145 per connected property. Refer also to pages 21, 23, 27 and Table 18 on page 201.
3. For general notes see page 32.

Figure 67: Pumping cost - sewerage



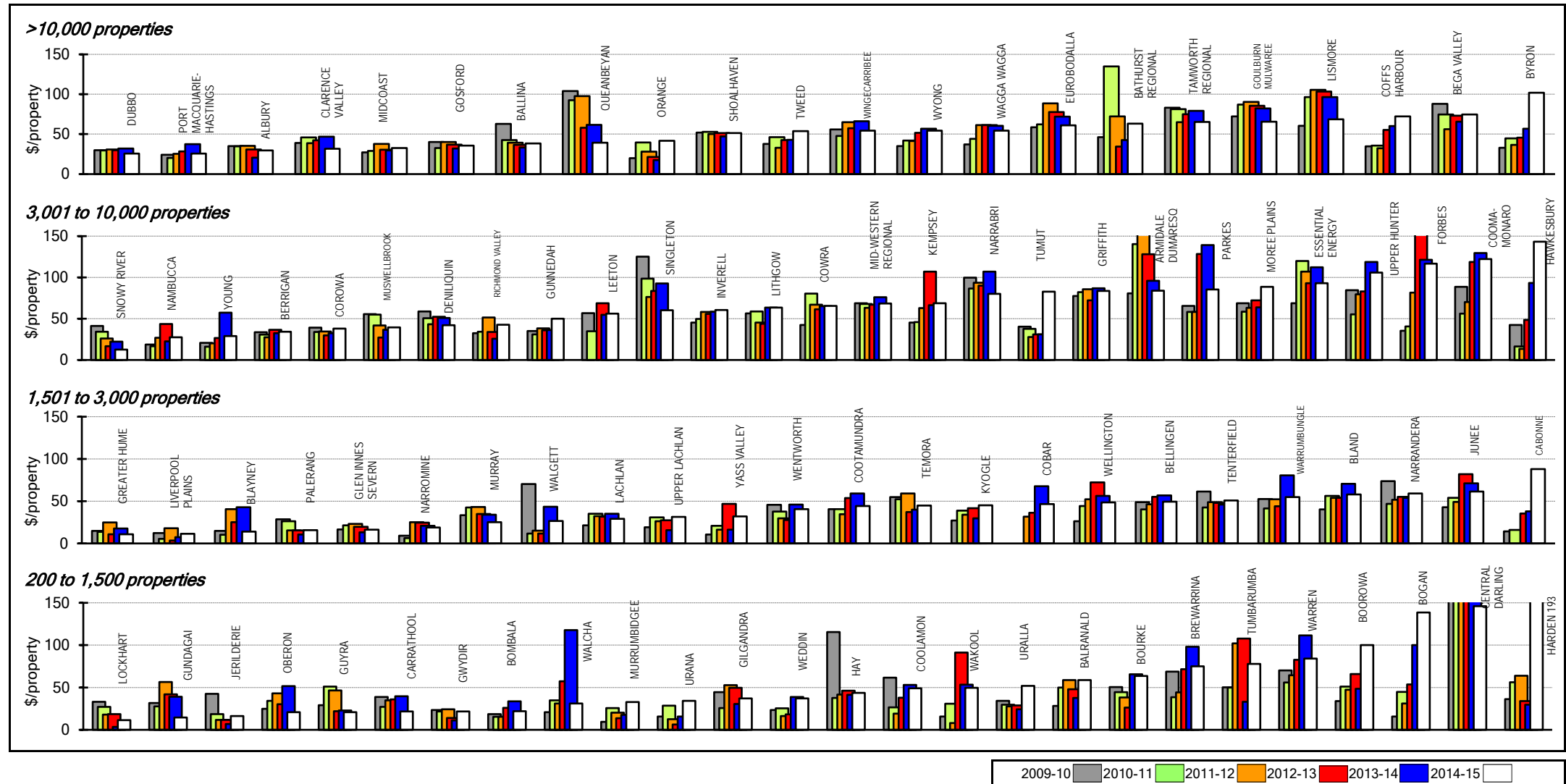
**Parameter:** Pumping station operation expenses (S\_2c) + energy cost (S\_2d) + treatment cost (S\_2e)

[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

#### Notes:

1. This figure shows ranked values of the 2014-15 sewerage pumping cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewerage pumping cost for the 26 LWUs shown ranges from \$0 to \$116 per connected property. Results for the previous 5 years are also shown.
2. The Statewide median pumping cost is \$72 per connected property. Refer also to page 27 and Table 18 on page 201.
3. For general notes see page 32.

Figure 68: Sewer main cost - sewerage



**Parameter:** Sewer main operation cost (S\_2a) + sewer main maintenance cost (S\_2b)

[No. of residential assessments (SB13) + No. of non-residential assessments (SB14)] x No. of connected properties per assessment

**Notes:**

1. This figure shows ranked values of the 2014-15 sewer main cost for each Local Water Utility (LWU) in 4 groups based on the number of connected properties served – over 10,000, 3,001 to 10,000, 1,501 to 3,000 and 200 to 1,500. Each white bar represents one LWU. As an example, for the second graph (property range from 3,001 to 10,000), the 2014-15 sewer main cost for the 27 LWUs shown ranges from \$13 to \$143 per connected property. Results for the previous 5 years are also shown.
2. The Statewide median sewer main cost is \$51 per connected property. Refer also to page 27 and Table 18 on page 201.
3. For general notes see page 32.



10. TABLES

Table 1: NSW water supply statewide performance indicators 2014-15

STATEWIDE PERCENTILES (% of properties)<sup>1,2</sup>

| NWI No.                    | NSW No. | UTILITY CHARACTERISTICS  | 20%    | Statewide Median (50%) | 80%    |      | National Median Utilities with >10,000 props |
|----------------------------|---------|--|--------|------------------------|--------|------|--|
|                            | 3       | Residential connected properties (% of total)                                    | 95     | 92                     | 88     |      |  |
|                            | 4       | New Residential Dwellings Connected to Water Supply (%)                          | 1.7    | 1.1                    | 0.6    |      |  |
| A3                         | 5       | Properties Served per km of Main   | 52     | 31                     | 23     | A3   | 34   |
|                            | 6       | Rainfall (% of average annual rainfall)  | 138    | 116                    | 93     |      |  |
| W11                        | 7       | Total Urban Water Supplied (at Master Meters - ML)                               | 14,400 | 7,000                  | 2,900  | W11  | 9,060  |
|                            | 8       | Peak Week to Average Consumption (%)   | 120    | 141                    | 168    |      |  |
|                            | 9       | Renewals Expenditure (% of current replacement cost of system assets)            | 0.9    | 0.4                    | 0.3    |      |  |
|                            | 10      | Employees (employees per 1000 properties)  | 1.0    | 1.4                    | 2.0    |      |  |
| SOCIAL - Charges/Bills     |         |  |        |                        |        |      |  |
| P1.3                       | 12a     | Residential Water Usage Charge (c/kL for 2014-15)                                | 256    | 213                    | 152    | P1.3 | 185  |
|                            | 12      | Residential Water Usage Charge (c/kL for 2015-16)                                | 270    | 226                    | 160    |      |  |
| P3                         | 14a     | Typical Residential Bill (\$/assessment for 2014-15)                             | 503    | 566                    | 666    | P3   | 589  |
|                            | 14      | Typical Residential Bill (\$/assessment for 2015-16)                             | 492    | 593                    | 691    |      |  |
|                            | 15a     | Typical Developer Charge (\$/equivalent tenement for 2014-15)                    | 8,600  | 5,500                  | 3,300  |      |  |
|                            | 15      | Typical Developer Charge (\$/equivalent tenement for 2015-16)                    | 8,700  | 5,900                  | 3,200  |      |  |
| F4                         | 16      | Residential Revenue from Usage Charges (% of residential revenue)                | 75     | 72                     | 65     | F4   | 66   |
| F5                         | 17      | Revenue per property - Water (\$)  | 1,011  | 827                    | 694    | F5   | 881  |
| SOCIAL - Health            |         |  |        |                        |        |      |  |
|                            | 18      | Water Supply Coverage (% of Urban Population with reticulated WS)                | 99.8   | 99.5                   | 97.4   |      |  |
|                            | 19      | Physical Water Quality Compliance (%)  | 100    | 100                    | 100    |      |  |
|                            | 19a     | Chemical Water Quality Compliance (%)  | 100    | 100                    | 100    |      |  |
|                            | 20      | Microbiological (E. coli) Water Quality Compliance (%)                           | 100    | 100                    | 100    |      |  |
| H3                         | 20a     | Percent Population with Microbiological Compliance                               | 100    | 100                    | 100    | H3   | 100  |
| SOCIAL - Levels of Service |         |  |        |                        |        |      |  |
| C9                         | 25      | Water Quality Complaints (per 1000 properties)                                   | 0.2    | 2.9                    | 9      | C9   | 1.5  |
| C10                        | 26      | Water Service Complaints (per 1000 properties)                                   | 0.5    | 6                      | 27     | C10  | 0.5  |
| C17                        | 27      | Incidence of unplanned interruptions (per 1000 properties)                       | 6      | 24                     | 74     | C17  | 91   |
| C15                        | 28      | Average Duration of Interruption (minutes)                                       | 120    | 133                    | 205    | C15  | 117  |
| A8                         | 30      | Number of Main Breaks (per 100 km of main)                                       | 5      | 9                      | 16     | A8   | 13   |
|                            | 31      | Drought Water Restrictions (% of time)   | 0      | 0                      | 56     |      |  |
|                            | 32      | Total Days Lost (%)  | 0      | 3                      | 5      |      |  |
| ENVIRONMENTAL              |         |  |        |                        |        |      |  |
| W12                        | 33      | Average Annual Residential Supplied (kL/property)                                | 145    | 166                    | 245    | W12  | 181  |
|                            | 33a     | Average Annual Residential Supplied - COASTAL (kL/property)                      | 141    | 150                    | 172    |      |  |
|                            | 33b     | Average Annual Residential Supplied - INLAND (kL/property)                       | 181    | 225                    | 327    |      |  |
|                            | 33c     | Peak Day Water Supplied (kL/d/connected property)                                | 0.9    | 1.2                    | 2.1    |      |  |
|                            | 33d     | Total Urban Recycled Water Supplied (ML)   | 58     | 288                    | 517    |      |  |
| A10                        | 34      | Real Loss (leakage) (L/service connection/d)                                     | 50     | 60                     | 90     | A10  | 76   |
| W10.1/C4                   | 34a     | Non Revenue Water (NRW) (L/service connection/d)                                 | 67     | 94                     | 136    |      | 78   |
|                            | 35      | Energy Consumption (kWh/ML)  | 420    | 700                    | 880    |      |  |
|                            | 36      | Renewable Energy Consumption (% of Total Energy)                                 | 0.0    | 0.0                    | 0.0    |      |  |
| E12                        | 36a     | Net Greenhouse Gas Emissions - WS & Sge (net tonnes CO2 - equivalents/1000props) | 290    | 410                    | 460    | E12  | 393  |
| ECONOMIC - Financial       |         |  |        |                        |        |      |  |
|                            | 42      | Current Replacement Cost per Assessment - Water (\$)                             | 20,900 | 16,400                 | 12,200 |      |  |
| F17                        | 43      | Economic Real Rate of Return - Water (%)   | 2.0    | 1.6                    | 0.8    | F17  | 1.9  |
|                            | 44      | Return on Assets - Water (%)   | 2.8    | 1.0                    | 0.4    |      |  |
| F9/C4                      | 44a     | Written Down Replacement Cost - Water (\$/property)                              | 15,100 | 10,000                 | 7,600  |      | 7,660  |
| F22                        | 45      | Net Debt to Equity - WS & Sge(%)   | 10     | -1.0                   | -8     | F22  | 11   |
| F23                        | 46      | Interest Cover - WS & Sge  | >100   | 4                      | 1      | F23  | 2  |
|                            | 47      | Loan Payment - Water (\$/property)   | 356    | 69                     | 0      |      |  |
| F30                        | 47a     | Net Profit After Tax Ratio - WS & Sge (%)  | 27     | 10                     | 2      | F30  | 10   |
| F24                        | 47b     | Net Profit After Tax - WS & Sge (\$'000)   | 6,560  | 2,340                  | 260    | F24  | 7,120  |
| ECONOMIC - Efficiency      |         |  |        |                        |        |      |  |
|                            | 48      | Operating Cost (OMA) per 100 km of Main (\$'000)                                 | 890    | 1,320                  | 1,730  |      |  |
| F11                        | 49      | Operating Cost (OMA) per property (\$/property)                                  | 310    | 400                    | 590    | F11  | 455  |
|                            | 50      | Operating Cost (OMA) per kL (c/kL)   | 87     | 129                    | 168    |      |  |
|                            | 51      | Management Cost (\$/property)  | 105    | 141                    | 192    |      |  |
|                            | 52      | Treatment Cost (\$/property)   | 36     | 58                     | 134    |      |  |
|                            | 53      | Pumping Cost (\$/property)   | 13     | 31                     | 70     |      |  |
|                            | 54      | Energy Cost (\$/property)  | 8      | 18                     | 54     |      |  |
|                            | 55      | Water Main Cost (\$/property)  | 49     | 74                     | 100    |      |  |
| F28                        | 56      | Capital Expenditure - Water Supply (\$/property)                                 | 350    | 155                    | 81     | F28  | 163  |

Notes:

1. The above NSW performance indicators are Statewide Percentiles which are calculated on a percentage of connected properties basis as this best reveals statewide performance by giving due weight to larger LWUs and reducing the effect of smaller LWUs.
2. 20% is the top 20% of properties, Median (50%) is the median of properties (Statewide) and 80% is the bottom 20% of properties.
3. To compare the performance of one LWU with other LWUs, the calculation of percentiles on a percentage of LWUs basis is the most appropriate. Percentiles (on a percentage of LWUs basis) are shown on the Table on page 278 of Appendix C.
4. National Medians are from the National Performance Report 2014-15 which shows the performance indicators for 76 Australian urban water utilities providing reticulated water supply services to >10,000 properties [Note 14 on page 34]. The 7 bulk supply utilities are excluded.

**Table 2. NSW sewerage statewide performance indicators 2014-15**STATEWIDE PERCENTILES (% of properties)<sup>1,2</sup>

| NWI No.                           | NSW No. | UTILITY CHARACTERISTICS  | 20%    | Statewide Median (50%) | 80%    |      | National Median Utilities with >10,000 props |
|-----------------------------------|---------|--|--------|------------------------|--------|------|--|
|                                   | 3       | Residential connected properties (% of total)  | 95     | 93                     | 91     |      |  |
|                                   | 4       | New Residential Dwellings Connected to Sewerage (%)  | 1.8    | 1.0                    | 0.4    |      |  |
| A6                                | 5       | Properties Served per km of Main   | 51     | 38                     | 33     | A6   | 40   |
| W18                               | 6       | Volume of Sewage Collected (ML)  | 16,100 | 5,200                  | 1,400  | W18  | 5,640  |
|                                   | 7       | Renewals Expenditure (% of current replacement cost of system assets)  | 1.1    | 0.5                    | 0.2    |      |  |
|                                   | 8       | Employees (per 1000 properties)  | 0.9    | 1.6                    | 2.1    |      |  |
| <b>SOCIAL - Charges/Bills</b>     |         |  |        |                        |        |      |  |
| P4.1                              | 11a     | Residential Access Charge for 2014-15 (\$/assessment)  | 470    | 669                    | 781    | P4.1 | 620  |
|                                   | 11      | Residential Access Charge for 2015-16 (\$/assessment)  | 485    | 697                    | 804    |      |  |
| P6                                | 12a     | Typical Residential Bill for 2014-15 (\$/assessment)   | 470    | 669                    | 791    | P6   | 667  |
|                                   | 12      | Typical Residential Bill for 2015-16 (\$/assessment)   | 485    | 697                    | 806    |      |  |
|                                   | 13a     | Typical Developer Charge for 2014-15 (\$/equivalent tenement)  | 9,300  | 5,100                  | 2,000  |      |  |
|                                   | 13      | Typical Developer Charge for 2015-16 (\$/equivalent tenement)  | 9,500  | 5,100                  | 2,100  |      |  |
|                                   | 14      | Non-residential sewer usage charge (c/kL)  | 220    | 150                    | 96     |      |  |
| F6                                | 15      | Revenue per property - Sge (\$)  | 1,131  | 882                    | 664    | F6   | 947  |
| <b>SOCIAL - Health</b>            |         |  |        |                        |        |      |  |
|                                   | 16      | Sewerage Coverage (% of Urban Population with Reticulated Sge Service)   | 99.5   | 97.9                   | 94.0   |      |  |
| E3                                | 17      | Percent of sewage treated to a tertiary level (%)  | 100    | 96.8                   | 30.4   | E3   | 91   |
|                                   | 18      | Percent of sewage volume treated that was compliant (%)  | 100    | 100.0                  | 94.1   |      |  |
| <b>SOCIAL - Levels of Service</b> |         |  |        |                        |        |      |  |
|                                   | 21      | Odour Complaints (per 1000 properties)   | 0.0    | 0.8                    | 1.3    |      |  |
| C11                               | 22      | Sewerage Service Complaints (per 1000 properties)  | 2      | 6                      | 23     | C11  | 1.0  |
| C16                               | 23a     | Average Sewerage Interruption (min)  | 60     | 95                     | 120    | C16  | 102  |
|                                   | 25      | Total Days Lost  | 0.0    | 3.1                    | 4.6    |      |  |
| <b>ENVIRONMENTAL</b>              |         |  |        |                        |        |      |  |
| W19                               | 26      | Volume of Sewage Collected per property (kL)   | 281    | 238                    | 190    | W19  | 214  |
| W26                               | 26a     | Total recycled water supplied (ML)   | 1,810  | 520                    | 20     | W26  | 1,580  |
| W27                               | 27      | Recycled Water (% of effluent recycled)  | 55     | 10                     | 0      | W27  | 15   |
| E8                                | 28      | Biosolids Reuse (%)  | 100    | 100                    | 0      | E8   | 100  |
|                                   | 30      | Energy Consumption - sewerage (kWh/ML)   | 630    | 790                    | 1,050  |      |  |
|                                   | 31      | Renewable Energy Consumption (% of total energy consumption)   | 0.0    | 0.0                    | 0.0    |      |  |
| E12                               | 32      | Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 proper                                | 290    | 410                    | 460    | E12  | 393  |
|                                   | 33      | 90th Percentile Licence Limits for Effluent Discharge:<br>BOD 35 mg/L; SS 40 mg/L; Total N 25 mg/L; Total P 5 mg/L |        |                        |        |      |  |
|                                   | 34      | Compliance with BOD in Licence (%)   | 100    | 100                    | 100    |      |  |
|                                   | 35      | Compliance with SS in Licence (%)  | 100    | 100                    | 100    |      |  |
| A14                               | 36      | Sewerage Main Breaks and Chokes (per 100 km of main)   | 11     | 35                     | 61     | A14  | 17   |
|                                   | 37a     | Sewer Overflows (per 100 km of main)   | 3      | 10                     | 43     |      |  |
| E13                               | 37b     | Sewer Overflows Reported to Environmental Regulator (per 100 km of main)   | 0.0    | 0.9                    | 2.9    | E13  | 0.5  |
|                                   | 39      | Non-residential percentage of sewage collected (%)   | 28     | 20                     | 15     |      |  |
| <b>ECONOMIC - Financial</b>       |         |  |        |                        |        |      |  |
|                                   | 43      | Revenue from Non-residential and Trade Waste Charges (% of total rates & charges)                                  | 25     | 18                     | 13     |      |  |
|                                   | 44      | Revenue from Trade Waste Charges (% of total rates & charges)  | 7      | 2                      | 0      |      |  |
|                                   | 45      | Current Replacement Cost of Fixed Sewerage Assets (\$/assessment)  | 24,000 | 16,500                 | 13,900 |      |  |
| F18                               | 46      | Economic Real Rate of Return - sewerage (%)  | 3.1    | 1.7                    | 0.4    | F18  | 3.0  |
|                                   | 46a     | Return on Assets - sewerage (%)  | 3.1    | 1.3                    | 0.2    |      |  |
| F10/C8                            | 46b     | Written Down Replacement Cost - sewerage (\$/property)   | 17,400 | 11,600                 | 7,800  |      | 9,350  |
| F22                               | 47      | Net Debt to Equity - WS & Sge (%)  | 10     | -1.0                   | -8     | F22  | 11   |
| F23                               | 48      | Interest Cover - WS & Sge  | >100   | 4                      | 1      | F23  | 2  |
|                                   | 48a     | Loan Payment - sewerage (\$/property)  | 254    | 110                    | 27     |      |  |
| F24                               | 48b     | Net Profit After Tax - WS & Sge (\$'000)   | 6,560  | 2,340                  | 260    | F24  | 7,120  |
| <b>ECONOMIC - Efficiency</b>      |         |  |        |                        |        |      |  |
|                                   | 49      | Operating Cost - sewerage (OMA) per 100 km of Main (\$'000)  | 1,370  | 1,720                  | 1,970  |      |  |
| F12                               | 50      | Operating Cost - sewerage (OMA) per property (\$/property)   | 350    | 420                    | 510    | F12  | 400  |
|                                   | 51      | Operating Cost - sewerage (OMA) per kL (c/kL)  | 134    | 193                    | 234    |      |  |
|                                   | 52      | Management Cost - sewerage (\$/property)   | 98     | 160                    | 188    |      |  |
|                                   | 53      | Treatment Cost - sewerage (\$/property)  | 106    | 145                    | 198    |      |  |
|                                   | 54      | Pumping Cost - sewerage (\$/property)  | 35     | 72                     | 95     |      |  |
|                                   | 55      | Energy Cost - sewerage (\$/property)   | 29     | 37                     | 55     |      |  |
|                                   | 56      | Sewer Main Cost (\$/property)  | 32     | 51                     | 65     |      |  |
| F29                               | 57      | Capital Expenditure - sewerage (\$/property)   | 404    | 204                    | 107    | F29  | 217  |

**Notes:**

1. The above NSW performance indicators are Statewide Percentiles which are calculated on a percentage of connected properties basis as this best reveals statewide performance by giving due weight to larger LWUs and reducing the effect of smaller LWUs.
2. 20% is the top 20% of properties, Median (50%) is the median of properties (Statewide) and 80% is the bottom 20% of properties.
3. To compare the performance of one LWU with other LWUs, the calculation of percentiles on a percentage of LWUs basis is the most appropriate. Percentiles (on a percentage of LWUs basis) are shown on the Table on page 279 of Appendix C.
4. National Medians are from the National Performance Report 2014-15 which shows the performance indicators for 75 Australian urban water utilities providing reticulated sewerage services to >10,000 connected properties [Note 14 on page 34].

**Table 2A. NSW water supply and sewerage statewide performance indicators 2014-15**STATEWIDE PERCENTILES (% of properties)<sup>1,2</sup>

| NWI No. | NSW No. | UTILITY CHARACTERISTICS  | 20%    | Statewide Median (50%) | 80%    |         | National Median Utilities with >10,000 props |
|---------|---------|--|--------|------------------------|--------|---------|--|
|         | 1       | Employees - WS & Sge (employees per 1000 properties)                             | 1.9    | 3.0                    | 4.1    |         |  |
|         |         | <b>SOCIAL - Charges/Bills</b>  |        |                        |        |         |  |
| P8      | 2       | Typical Residential Bill - WS & Sge for 2014-15 (\$/assessment)                  | 973    | 1,235                  | 1,457  | P8      | 1,320  |
|         | 2a      | Typical Residential Bill - WS & Sge for 2015-16 (\$/assessment)                  | 977    | 1,290                  | 1,497  |         |  |
|         | 3       | Typical Developer Charge - WS & Sge for 2014-15 (\$/equivalent tenement)         | 17,900 | 10,600                 | 5,300  |         |  |
|         | 3a      | Typical Developer Charge - WS & Sge for 2015-16 (\$/equivalent tenement)         | 18,200 | 11,000                 | 5,300  |         |  |
|         |         | <b>SOCIAL - Levels of Service</b>  |        |                        |        |         |  |
| C12     | 4       | Billing and account complaints - WS & Sge (per 1000 properties)                  | 0.2    | 0.7                    | 2.3    | C12     | 0.3  |
| C13     | 5       | Total Water and Sewerage complaints (no. per 1000 properties)                    | 3      | 19                     | 59     | C13     | 4  |
| C18     | 6       | Customer Restrictions for Non Payment of Bill - WS & Sge (per 1000 properties)   | 0.0    | 0.0                    | 0.8    | C18     | 0.3  |
|         |         | <b>ENVIRONMENTAL</b>   |        |                        |        |         |  |
| E12     | 7       | Net Greenhouse Gas Emissions - WS & Sge (net tonnes CO2 - equivalents/1000props) | 290    | 410                    | 460    | E12     | 393  |
|         |         | <b>ECONOMIC - Financial</b>  |        |                        |        |         |  |
| F1+F2   | 8       | Total Revenue - WS & Sge (\$'000)  | 85,400 | 37,200                 | 11,600 | F1+F2   | 53,900                                       |
| F3      | 9       | Total income for whole of utility- WS & Sge (\$'000)                             | 87,000 | 35,800                 | 10,300 | F3      | 57,800                                       |
| F5+F6   | 10      | Total Revenue per property - WS & Sge (\$/property)                              | 2,140  | 1,710                  | 1,360  | F5+F6   | 1,830  |
| F7      | 11      | Total income for whole of utility - WS & Sge (\$/property)                       | 1,870  | 1,630                  | 1,380  | F7      | 1,750  |
| F8      | 12      | Revenue from Community Service Obligations (%)                                   | 1.5    | 1.3                    | 0.9    | F8      | 1.7  |
|         | 13      | Current Replacement Cost per Assessment - WS & Sge (\$)                          | 44,900 | 32,900                 | 26,100 |         |  |
| F19     | 14      | Economic Real Rate of Return - WS & Sge (%)                                      | 2.9    | 1.4                    | 0.8    | F19     | 2.3  |
|         | 15      | Return on Assets - WS & Sge (%)  | 2.8    | 1.0                    | 0.3    |         |  |
| F22     | 16      | Net Debt to Equity - WS & Sge(%)   | 10     | -1.0                   | -8     | F22     | 11   |
| F23     | 17      | Interest Cover - WS & Sge  | >100   | 4                      | 1      | F23     | 2.0  |
| F24     | 18      | Net Profit After Tax (NPAT) - WS & Sge (\$'000)                                  | 6,560  | 2,340                  | 260    | F24     | 7,120  |
| F30     | 19      | NPAT Ratio - WS & Sge (%)  | 27     | 10                     | 2      | F30     | 10   |
|         |         | <b>ECONOMIC - Efficiency</b>   |        |                        |        |         |  |
| F13     | 20      | Operating Cost - WS & Sge (OMA) (\$/property)                                    | 660    | 820                    | 1,100  | F13     | 862  |
|         | 21      | Management Cost (\$/property)  | 203    | 301                    | 380    |         |  |
| F16     | 22      | Capital Expenditure - WS & Sge (\$'000)  | 27,400 | 8,200                  | 2,500  | F16     | 15,800                                       |
| F28+F29 | 23      | Capital Expenditure - WS & Sge (\$/prop)   | 754    | 359                    | 188    | F28+F29 | 380  |

- Notes**
1. The above NSW performance indicators are Statewide Percentiles which are calculated on a percentage of connected properties basis as this best reveals statewide performance by giving due weight to larger LWUs and reducing the effect of smaller LWUs.
  2. 20% is the top 20% of properties, Median (50%) is the median of properties (Statewide) and 80% is the bottom 20% of properties.
  3. To compare the performance of one LWU with other LWUs, the calculation of percentiles on a percentage of LWUs basis is the most appropriate. Percentiles (on a percentage of LWUs basis) are shown on the Table on pages 278 and 279 of Appendix C.
  4. National Medians are from the National Performance Report 2014-15 which shows the performance indicators for 71 Australian urban water utilities providing reticulated water supply and sewerage services to >10,000 properties [Note 14 on page 34].
  5. Bulk supply utilities and single service utilities are excluded.



Table 3: 2014-15 best-practice management implementation

| WATER UTILITY<br>(sorted on connected properties) |                                       | WATER SUPPLY<br>& SEWERAGE<br>REVENUE<br><br>(\$M) | WATER SUPPLY  |   |   |  |   |  |   |  |  |   |  | SEWERAGE  |   |  |   |   |   |  |   |  |   |   |   |       |
|---|---------------------------------------|--|---|---|---|--|---|--|---|--|--|---|--|---|---|--|---|---|---|--|---|--|---|---|---|-------|
|   |                                       |  | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)   |   |   |  |   |  |   |  |  |   |  | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)           |   |  |   |   |   |  |   |  |   |   |   |       |
|   |                                       |  | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)              |   |  |   |  | (3)<br>Sound Water<br>Conservation<br>Plan<br>implemented<br>(Yes/No) | (4)<br>Sound<br>Drought<br>Management<br>Plan<br>implemented<br>(Yes/No) | (5)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (6)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 10<br>requirements<br>(Note 2)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)                 |   |   |   |  |   | (3)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (4)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 9<br>requirements<br>(Note 3)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 |       |
|   |                                       |  |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Revenue from<br>Residential<br>Usage<br>Charges<br>>=75%<br>(Note 8) | (2d)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2e)<br>DSP with<br>Commercial<br>Developer<br>Charges |   |  |  |   |  |   |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross<br>subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2d)<br>Appropriate<br>Trade Waste<br>Fees &<br>Charges | (2e)<br>DSP with<br>commercial<br>developer<br>charges | (2f)<br>Liquid trade<br>waste<br>regulation<br>policy and<br>approvals<br>implemented |  |   |   |   |       |
|   |                                       |  |   |   |   |  |   |  |   |  |  |   |  |   |   |  |   |   |   |  |   |  |   |   |   |       |
| LWUs with >10,000 Properties                      |                                       |  |   |   |   |  |   |  |   |  |  |   |  |   |   |  |   |   |   |  |   |  |   |   |   |       |
| 1   | Gosford                               | 95.3   | Yes+  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 2   | Wyong                                 | 87.8   | Yes*  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 3   | Shoalhaven                            | 73.5   | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   | 1,433   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   | 1,276 |
| 4   | Rous (Bulk Supplier) (NO SGE)         | 23.0   | Yes*  | Yes   |   |  |   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   |  |   |   |   |  |   |  |   |   |   |       |
| 5   | MidCoast                              | 71.0   | Yes*  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 6   | Tweed                                 | 62.3   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 7   | Port Macquarie-Hastings (Unfiltered)  | 51.3   | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 90  | 860   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 8   | Riverina (Groundwater) (NO SGE)       | 30.5   | Yes   | Yes   | Yes   | Yes*   |   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   |  |   |   |   |  |   |  |   |   |   |       |
| 9   | Wagga Wagga (NO WS)                   | 19.6   |   |   |   |  |   |  |   |  |  |   |  |   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 10  | Coffs Harbour                         | 50.7   | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes*   | Yes   | C   | 100   |       |
| 11  | Albury City                           | 37.7   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 12  | Fish River WS (Bulk Supplier, No Sge) | 10.0   | Yes*  | Yes*  |   |  |   |  | Yes   | Yes  | Yes  |   |  | 83  |   |  |   |   |   |  |   |  |   |   |   |       |
| 13  | Tamworth Regional                     | 41.6   | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 14  | Clarence Valley                       | 32.9   | Yes+  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 15  | Eurobodalla                           | 36.3   | Yes+  | Yes   | Yes   | Yes**  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   | 530   |
| 16  | Wingecarribee                         | 30.0   | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 17  | Queanbeyan (Reticulator)              | 30.8   | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 90  |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 18  | Dubbo                                 | 37.8   | Yes+  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 19  | Orange                                | 31.6   | Yes*  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 20  | Goulburn Mulwaree                     | 21.1   | Yes   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 21  | Bathurst Regional                     | 27.5   | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 22  | Lismore (Reticulator)                 | 23.1   | Yes+  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   |   | Yes  | Yes   | Yes*   | Yes   | C   | 89  |       |
| 23  | Bega Valley (Unfiltered)              | 26.6   | Yes*  | Yes*  | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 90  |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   |   | 100   |       |
| 24  | Ballina (Reticulator)                 | 28.4   | Yes+  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 25  | Kempsey (Groundwater)                 | 21.8   | Yes+  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 26  | Essential Energy                      | 21.0   | Yes+  | Yes*  | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes*   | Yes   | C   | 100   |       |
| 27  | Byron (Reticulator)                   | 25.2   | Yes*  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 28A   | Goldenfields (Reticulator) (NO SGE)   | 14.7   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 90  |   |  |   |   |   |  |   |  |   |   |   |       |
| 28B   | Goldenfields (Bulk) (NO SGE)          | 5.5  | Yes*  | Yes   |   |  |   | Yes  | Yes   | Yes  | Yes  |   |  | 86  |   |  |   |   |   |  |   |  |   |   |   |       |
| % of LWUs 'Yes' (>10,000 connected properties)    |                                       |  | 100%  | 100%  | 100%  | 64%  | 96%   | 96%  | 100%  | 100%   | 100%   | 89%   | 95%  | Overall   |   | 100%   | 100%  | 100%  | 96%   | 100%   | 100%  | 100%   | 100%  | 100%  | Overall   |       |
| LWUs with 3,001 - 10,000 Properties               |                                       |  |   |   |   |  |   |  |   |  |  |   |  |   |   |  |   |   |   |  |   |  |   |   |   |       |
| 29  | Armidale Dumaresq                     | 14.1   | Yes*  | Yes   | Yes   | Yes  |   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 90  |   | Yes*   | Yes   | Yes   |   | Yes  | Yes   | Yes*   | Yes   | Yes   | 89  |       |
| 30  | Griffith                              | 16.8   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 30A   | Hawkesbury (NO WS)                    | 5.8  |   |   |   |  |   |  |   |  |  |   |  |   |   | Yes*   | Yes*  | Yes   | Yes*  | Yes  | Yes*  | Yes  | Yes   | E   | 100   |       |
| 31  | Lithgow                               | 13.2   | Yes   | Yes   | Yes   | Yes  | Yes   |  | Yes   | Yes  | Yes  | Yes   | E  | 90  |   | Yes  | Yes   | Yes   | Yes   | Yes  |   | Yes  | Yes   | E   | 89  |       |
| 32  | Mid-Western Regional                  | 13.7   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 100   |   | Yes*   | Yes   | Yes   | Yes   |  | Yes   |  | Yes   |   | 78  |       |
| 33  | Richmond Valley                       | 13.3   | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 34  | Nambucca (Groundwater)                | 10.3   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   | 181   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 35  | Singleton                             | 8.3  | Yes   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 90  |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 36  | Parkes                                | 10.3   | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 37  | Inverell                              | 6.9  | Yes*  | Yes   | Yes   |  |   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 70  |   | Yes*   | Yes   | Yes   |   |  | Yes   |  | Yes   |   | 56  |       |
| 38  | Moree Plains (Groundwater)            | 9.8  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 100   | 254   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   | 132   |
| 39  | Cowra                                 | 10.1   | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 100   |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   |   | 100   |       |
| 40  | Central Tablelands (NO SGE)           | 5.2  | Yes   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   |  |   |   |   |  |   |  |   |   |   |       |
| 41  | Muswellbrook                          | 9.0  | Yes+  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 42  | Corowa                                | 9.4  | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 90  |   | Yes+   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 89  |       |
| 43  | Tumut                                 | 7.0  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 100   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 44  | Gunnedah (Groundwater)                | 7.7  | Yes   | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes*   | Yes   | C   | 100   |       |
| 45  | Upper Hunter                          | 9.3  | Yes   | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 100   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   |   | 100   |       |
| 46  | Narrabri (Groundwater)                | 6.8  | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 80  |   | Yes*   | Yes   | Yes   |   | Yes  | Yes   | Yes  | Yes   |   | 78  |       |
| 47  | Bellingen (Unfiltered)                | 5.4  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | C  | 100   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | C   | 100   |       |
| 48  | Leeton                                | 5.8  | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | E  | 90  |   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | E   | 100   |       |
| 49  | Young (Reticulator)                   | 6.7  | Yes   | Yes*  | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   |  | 90  |   | Yes  | Yes   | Yes   |   | Yes  | Yes   | Yes  | Yes   |   | 89  |       |



Table 3: 2014-15 best-practice management implementation

| WATER UTILITY<br>(sorted on connected properties)     |                            | WATER SUPPLY<br>& SEWERAGE<br>REVENUE<br><br>(\$M) | WATER SUPPLY  |   |   |  |   |  |   |  |  |   |  | SEWERAGE  |   |  |   |   |   |  |   |  |   |   |   |
|---|----------------------------|--|---|---|---|--|---|--|---|--|--|---|--|---|---|--|---|---|---|--|---|--|---|---|---|
|   |                            |  | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)   |   |   |  |   |  |   |  |  |   |  | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)           |   |  |   |   |   |  |   |  |   |   |   |
|   |                            |  | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)              |   |  |   |  | (3)<br>Sound Water<br>Conservation<br>Plan<br>implemented<br>(Yes/No) | (4)<br>Sound<br>Drought<br>Management<br>Plan<br>implemented<br>(Yes/No) | (5)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (6)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 10<br>requirements<br>(Note 2)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)                 |   |   |   |  |   | (3)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (4)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 9<br>requirements<br>(Note 3)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 |
|   |                            |  |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Revenue from<br>Residential<br>Usage<br>Charges<br>>=75%<br>(Note 8) | (2d)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2e)<br>DSP with<br>Commercial<br>Developer<br>Charges |   |  |  |   |  |   |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross<br>subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2d)<br>Appropriate<br>Trade Waste<br>Fees &<br>Charges | (2e)<br>DSP with<br>commercial<br>developer<br>charges | (2f)<br>Liquid trade<br>waste<br>regulation<br>policy and<br>approvals<br>implemented |  |   |   |   |
| 50  | Cooma-Monaro               | 6.5  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 100  |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesE  | 100   |   |
| 51  | Forbes                     | 5.3  | Yes*  | Yes*  | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | Yes   | 100  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | 100   |   |
| 52  | Snowy River (Unfiltered)   | 6.9  | Yes   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 90   |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 53  | Berrigan (Dual Supply)     | 4.9  | Yes*  | Yes   | Yes   |  |   | Yes  | Yes   | Yes  | Yes  |   | 70   |   | Yes*  | Yes  | Yes   |   |   | Yes  |   | Yes  |   | 56  |   |
| 54  | Deniliquin                 | 5.3  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 100  | 91  | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesE  | 100   | 100   |
| 55  | Warrumbungle               | 3.9  | Yes   | Yes*  | Yes   | Yes  |   |  | Yes   | Yes  | Yes  | YesE  | 80   |   | Yes   | Yes*   | Yes   | Yes   |   |  | Yes   | Yes  | YesE  | 78  |   |
| 56  | Yass Valley                | 5.9  | Yes+  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes+  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| % of LWUs 'Yes' (3,001 - 10,000 connected properties) |                            |  | 100%  | 100%  | 100%  | 68%  | 86%   | 89%  | 100%  | 100%   | 100%   | 89%   | 93%  | Overall   | 100%  | 100%   | 100%  | 82%   | 86%   | 89%  | 89%   | 100%   | 89%   | 93%   | Overall   |
| LWUs with 1,501 - 3,000 Properties                    |                            |  |   |   |   |  |   |  |   |  |  |   |  |   |   |  |   |   |   |  |   |  |   |   |   |
| 57  | Wellington                 | 5.2  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 58  | Cootamundra (Reticulator)  | 3.7  | Yes*  | Yes*  | Yes   | Yes  | Yes   | Yes  |   | Yes  | Yes  |   | 80   |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  |   | 89  |   |
| 59  | Lachlan                    | 4.5  | Yes*  | Yes*  | Yes   | Yes  | Yes   | Yes*   | Yes   | Yes  | Yes  | Yes   | 100  |   | Yes*  | Yes*   | Yes   | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | 100   |   |
| 60  | Glen Innes Severn          | 3.3  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 61  | Liverpool Plains           | 3.8  |   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 80   |   |   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesE  | 89  |   |
| 62  | Narromine (Groundwater)    | 2.8  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 63  | Narrandera (Groundwater)   | 2.8  | Yes*  | Yes   | Yes   | Yes  | Yes   |  | Yes   | Yes  | Yes  |   | 80   |   | Yes*  | Yes  | Yes   | Yes   |   |  | Yes   | Yes  |   | 67  |   |
| 65  | Murray (Dual Supply)       | 4.4  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 100  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesE  | 100   |   |
| 67  | Cobar                      | 5.0  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes   | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 66  | Cobar WB                   | 4.0  | Yes   | Yes*  |   |  |   |  |   |  |  | Yes   | 43   |   |   |  |   |   |   |  |   |  |   |   |   |
| 68  | Tenterfield                | 3.4  | Yes   | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 90   |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 69  | Temora (NO WS)             | 0.8  |   |   |   |  |   |  |   |  |  |   |  |   | Yes*  | Yes  | Yes   | Yes   |   |  | Yes   |  |   | 56  |   |
| 70  | Kyogle                     | 2.5  | Yes*  | Yes   | Yes   |  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 90   |   | Yes*  | Yes  | Yes   | Yes   | Yes   | YesE   | Yes   | Yes  | YesC  | 100   |   |
| 71  | Palerang                   | 5.0  | Yes   | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  |   | 90   |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  |   | 89  |   |
| 72  | Bland (NO WS)              | 1.3  |   |   |   |  |   |  |   |  |  |   |  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  |   | 78  |   |
| 73  | Upper Lachlan              | 2.8  | Yes*  | Yes*  | Yes   | Yes*   |   | Yes  | Yes   | Yes  | Yes  | Yes   | 90   |   | Yes*  | Yes  | Yes   | Yes   |   | Yes  | Yes   | Yes  | Yes   | 89  |   |
| 74  | Wentworth (Dual Supply)    | 3.7  | Yes*  | Yes   | Yes   | Yes*   | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 100  |   | Yes*  | Yes  | Yes   |   | Yes   | Yes  | Yes   | Yes  | YesE  | 89  |   |
| 75  | Coonamble (Groundwater)    | 1.7  | Yes*  | Yes*  | Yes   | Yes  | Yes   | YesE   |   | Yes  | Yes  |   | 80   |   | Yes*  | Yes  | Yes   | Yes   |   | YesE   | Yes   |  |   | 67  |   |
| 76  | Harden (Reticulator)       | 2.8  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  |   | 90   |   | Yes*  | Yes  | Yes   | Yes   | Yes   | Yes*   |   | Yes  |   | 78  |   |
| 79  | Walgett (Dual Supply)      | 2.4  |   | Yes   | Yes   | Yes  | Yes   | Yes  |   | Yes  | Yes  | YesE  | 80   |   |   | Yes  | Yes   |   |   |  | Yes   | Yes  | YesE  | 56  |   |
| 80  | Greater Hume               | 3.1  | Yes   | Yes*  | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesE  | 100  |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesE  | 100   |   |
| % of LWUs 'Yes' (1,501 - 3,000 connected properties)  |                            |  | 89%   | 100%  | 95%   | 79%  | 89%   | 84%  | 84%   | 95%  | 100%   | 68%   | 88%  | Overall   | 90%   | 100%   | 100%  | 85%   | 75%   | 85%  | 85%   | 100%   | 65%   | 87%   | Overall   |
| LWUs with 200 - 1,500 Properties                      |                            |  |   |   |   |  |   |  |   |  |  |   |  |   |   |  |   |   |   |  |   |  |   |   |   |
| 77  | Junee (NO WS)              | 0.7  |   |   |   |  |   |  |   |  |  |   |  |   | Yes*  | Yes  | Yes   |   |   |  | Yes   | Yes  |   | 56  |   |
| 78  | Blayney (NO WS)            | 1.2  |   |   |   |  |   |  |   |  |  |   |  |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes*   | Yes   | Yes  | YesC  | 100   |   |
| 81  | Gwydir                     | 2.1  | Yes+  | Yes   | Yes   | Yes  | Yes   |  | Yes   | Yes  | Yes  | YesC  | 90   |   | Yes+  | Yes  | Yes   | Yes   | Yes   |  | Yes   | Yes  | YesC  | 89  |   |
| 83  | Oberon (Reticulator)       | 2.3  | Yes   | Yes   | Yes   | Yes  |   |  | Yes   | Yes  | Yes  | YesE  | 80   |   | Yes   | Yes  | Yes   | Yes   |   | Yes  | Yes   | Yes  | YesE  | 89  |   |
| 84  | Gilgandra (Groundwater)    | 1.7  | Yes*  | Yes   | Yes   | Yes  | Yes   | YesE   | Yes   | Yes  | Yes  |   | 90   |   | Yes*  | Yes*   | Yes   | Yes   | Yes   | YesE   | Yes   | Yes  |   | 89  |   |
| 85  | Uralla                     | 1.5  |   | Yes   | Yes   | Yes  |   |  | Yes   | Yes  | Yes  | YesC  | 70   |   |   | Yes  | Yes   | Yes   | Yes   |  |   | Yes  | YesC  | 67  |   |
| 86  | Hay (Dual Supply)          | 2.1  | Yes*  | Yes   | Yes   | Yes  |   | YesE   | Yes   | Yes  | Yes  |   | 80   |   | Yes*  | Yes  | Yes   | Yes   |   | YesE   | Yes   | Yes  |   | 78  |   |
| 87  | Bourke (Dual Supply)       | 2.7  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes   | Yes  | Yes   |   | Yes   | YesE   | Yes   | Yes  | YesC  | 89  |   |
| 88  | Wakool (Dual Supply)       | 2.3  | Yes   | Yes   | Yes   |  | Yes   | Yes*   | Yes   | Yes  | Yes  |   | 80   |   | Yes   | Yes  | Yes   |   |   | Yes*   |   | Yes  |   | 56  |   |
| 89  | Bogan                      | 3.0  | Yes   | Yes*  | Yes   | Yes  | Yes   | YesE   | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes   | Yes  | Yes   | Yes   | Yes   | YesE   | Yes   | Yes  | YesC  | 100   |   |
| 90  | Guyra                      | 1.8  | Yes*  | Yes*  | Yes   | Yes  |   | YesE   | Yes   | Yes  | Yes  |   | 80   |   | Yes*  | Yes  | Yes   |   | Yes   | YesE   | Yes   | Yes  |   | 78  |   |
| 91  | Cabonne                    | 2.6  | Yes*  | Yes*  | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | YesC  | 100  |   | Yes*  | Yes*   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | YesC  | 100   |   |
| 92  | Carrathool (Groundwater)   | 2.3  |   | Yes   | Yes   | Yes  | Yes   |  | Yes   | Yes  | Yes  |   | 70   |   |   | Yes  | Yes   |   |   |  |   | Yes  |   | 33  |   |
| 93  | Tumbarumba                 | 1.7  | Yes*  | Yes   | Yes   | Yes*   | Yes   | YesE   | Yes   | Yes  | Yes  | YesE  | 100  |   | Yes*  | Yes  | Yes   | Yes   | Yes   | YesE   | Yes   | Yes  | YesE  | 100   |   |
| 94  | Gundagai                   | 1.7  | Yes*  | Yes   | Yes   | Yes  | Yes   | Yes*   | Yes   | Yes  | Yes  |   | 90   |   | Yes*  | Yes  | Yes   | Yes   | Yes   |  | Yes   | Yes  |   | 67  |   |
| 95  | Weddin (NO WS)             | 0.5  |   |   |   |  |   |  |   |  |  |   |  |   | Yes   | Yes  | Yes   |   |   | Yes*   | Yes*  | Yes  | YesC  | 78  |   |
| 96  | Warren (Dual Supply)       | 1.2  | Yes   | Yes   | Yes   | Yes  |   | YesE   | Yes   | Yes  | Yes  | YesC  | 90   |   | Yes   |  | Yes   | Yes   | Yes   | YesE   | Yes   | Yes  | YesC  | 89  |   |
| 97  | Bombala                    | 1.1  |   | Yes*  | Yes   |  |   |  |   | Yes  | Yes  | Yes   | 50   |   |   | Yes*   | Yes   | Yes   | Yes   | Yes  |   | Yes  | Yes   | 78  |   |
| 98  | Walcha                     | 1.0  | Yes*  | Yes*  | Yes   | Yes  | Yes   |  | Yes   |  | Yes  | YesC  | 80   |   | Yes*  | Yes  | Yes   | Yes   | Yes   |  | Yes   | Yes  | YesC  | 89  |   |
| 99  | Coolamon (NO WS)           | 0.5  |   |   |   |  |   |  |   |  |  |   |  |   | Yes*  | Yes  | Yes   |   |   | Yes  |   | Yes  |   | 56  |   |
| 100   | Balranald (Dual Supply)    | 1.3  | Yes*  | Yes   | Yes   | Yes*   | Yes   |  | Yes   | Yes  | Yes  |   | 80   |   | Yes*  |  | Yes   | Yes   | Yes   |  |   | Yes  |   | 56  |   |
| 101   | Murrumbidgee (Groundwater) | 0.7  | Yes*  | Yes   | Yes   | Yes  | Yes   |  |   |  | Yes  |   | 60   |   | Yes*  | Yes*   | Yes   |   |   |  | Yes   | Yes  |   | 56  |   |



Table 3: 2014-15 best-practice management implementation

| WATER UTILITY<br>(sorted on connected properties)               |                               | WATER SUPPLY<br>& SEWERAGE<br>REVENUE<br><br>(\$M) | WATER SUPPLY  |   |   |  |   |  |   |  |  |   | SEWERAGE   |   |   |  |   |   |   |  |   |  |   |   |   |
|---|-------------------------------|--|---|---|---|--|---|--|---|--|--|---|--|---|---|--|---|---|---|--|---|--|---|---|---|
|   |                               |  | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)   |   |   |  |   |  |   |  |  |   | IMPLEMENTATION OF BPM OUTCOMES (see Note 1)                                      |   |   |  |   |   |   |  |   |  |   |   |   |
|   |                               |  | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)              |   |  |   |  | (3)<br>Sound Water<br>Conservation<br>Plan<br>implemented<br>(Yes/No) | (4)<br>Sound<br>Drought<br>Management<br>Plan<br>implemented<br>(Yes/No) | (5)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (6)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 10<br>requirements<br>(Note 2)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 | (1)<br>Strategic<br>Business Plan<br><br>Complete<br>Current<br>20 to 30-year<br>SBP & FP<br>(Yes/No) | (2)<br>Pricing and Developer Charges<br>(Yes/No)                 |   |   |   |  |   | (3)<br>Complete<br>performance<br>Reporting<br>by 15<br>September<br>each year<br>(Yes/No) | (4)<br>Integrated<br>Water Cycle<br>Management<br>Strategy<br>Commenced<br>(Yes/No) | (7)<br>Overall<br>implementation<br>of all 9<br>requirements<br>(Note 3)<br>(%) | (8)<br>Proposed<br>Dividend from<br>Surplus<br>\$'000 |
|   |                               |  |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Revenue from<br>Residential<br>Usage<br>Charges<br>>=75%<br>(Note 8) | (2d)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2e)<br>DSP with<br>Commercial<br>Developer<br>Charges |   |  |  |   |  |   |   | (2a)<br>Full cost-<br>recovery,<br>minimal<br>cross<br>subsidies | (2b)<br>Appropriate<br>Residential<br>Charges | (2c)<br>Appropriate<br>Non-<br>Residential<br>Charges | (2d)<br>Appropriate<br>Trade Waste<br>Fees &<br>Charges | (2e)<br>DSP with<br>commercial<br>developer<br>charges | (2f)<br>Liquid trade<br>waste<br>regulation<br>policy and<br>approvals<br>implemented |  |   |   |   |
| 102   | Lockhart (NO WS)              | 0.4  |   |   |   |  |   |  |   |  |  |   |  |   | Yes   | Yes  | Yes   | Yes   | Yes   |  | Yes   | YesE   | 89  |   |   |
| 103   | Central Darling (Dual Supply) | 2.0  |   | Yes   | Yes   | Yes  |   | Yes  | Yes   | Yes  | Yes  | 80  |  |   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes  | Yes   | Yes  | 78  |   |   |
| 104   | Boorowa                       | 1.1  | Yes   | Yes*  | Yes   | Yes*   |   | Yes  | Yes   | Yes  | Yes  | 90  |  |   | Yes   | Yes  | Yes   |   | Yes   | Yes  | Yes*  | Yes  | Yes   | 89  |   |
| 105   | Brewarrina (Dual Supply)      | 1.5  | Yes   | Yes*  | Yes   | Yes  | Yes   | Yes  | Yes   | Yes  | Yes  | 100   |  |   | Yes   | Yes  | Yes   |   | Yes   | Yes  | Yes   | Yes  | Yes   | 78  |   |
| 106   | Jerilderie (Dual Supply)      | 0.7  | Yes*  | Yes*  | Yes   | Yes  | Yes   | Yes*   | Yes   | Yes  | Yes  | 90  |  |   | Yes*  | Yes  | Yes   |   | Yes   | Yes  | Yes   | Yes  |   | 78  |   |
| 107   | Urana (NO WS)                 | 0.2  |   |   |   |  |   |  |   |  |  |   |  |   | Yes*  | Yes*   | Yes   |   | Yes   |  | Yes   | YesE   | 67  |   |   |
| % of LWUs 'Yes' (200 - 1,500 connected properties)              |                               |  | 82%   | 100%  | 100%  | 91%  | 64%   | 64%  | 91%   | 91%  | 100%   | 59%   | 84% Overall  |   | 86%   | 93%  | 100%  | 61%   | 64%   | 64%  | 68%   | 100%   | 61%   | 77% Overall   |   |
| TOTAL 'YES' for large LWUs (>\$10M Revenue) <sup>6</sup>        |                               |  | 36  | 36  | 34  | 25   | 32  | 34   | 36  | 36   | 36   | 34  | 22   |   | 32  | 32   | 32  | 30  | 31  | 31   | 31  | 32   | 32  | 28  |   |
| % of Large LWUs (36 WS LWUs and 32 SGE LWUs)                    |                               |  | 100%  | 100%  | 100%  | 69%  | 89%   | 94%  | 100%  | 100%   | 100%   | 94%   | 61%  |   | 100%  | 100%   | 100%  | 94%   | 97%   | 97%  | 97%   | 100%   | 100%  | 88%   |   |
| TOTAL 'YES' for remainder of LWUs (<\$10M Revenue) <sup>6</sup> |                               |  | 54  | 60  | 59  | 45   | 47  | 47   | 55  | 57   | 60   | 42  | 21   |   | 61  | 65   | 67  | 49  | 49  | 52   | 53  | 67   | 46  | 27  |   |
| % of Small LWUs (60 WS LWUs and 67 SGE LWUs)                    |                               |  | 90%   | 100%  | 100%  | 75%  | 78%   | 78%  | 92%   | 95%  | 100%   | 70%   | 35%  |   | 91%   | 97%  | 100%  | 73%   | 73%   | 78%  | 79%   | 100%   | 69%   | 40%   |   |
| TOTAL 'YES' for all LWUs  |                               |  | 90  | 96  | 93  | 70   | 79  | 82   | 93  | 93   | 96   | 76  | 43   |   | 93  | 97   | 99  | 79  | 80  | 84   | 84  | 99   | 78  | 54  |   |
| % all LWUs  |                               |  | 94%   | 100%  | 100%  | 75%  | 85%   | 83%  | 97%   | 97%  | 100%   | 79%   | 45%  |   | 94%   | 98%  | 100%  | 80%   | 81%   | 85%  | 85%   | 100%   | 79%   | 55%   |   |

Overall Implementation for all WS Businesses 91%

Overall Implementation for all SGE Businesses 89%

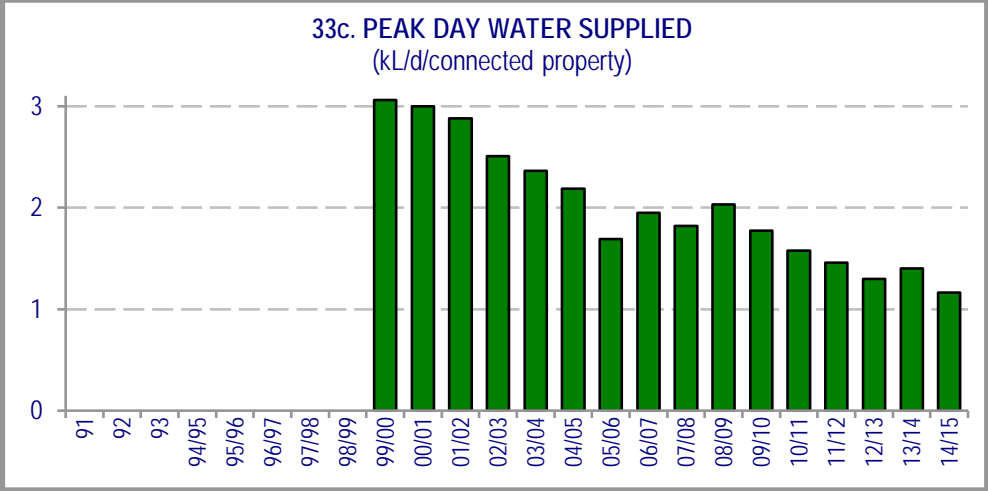
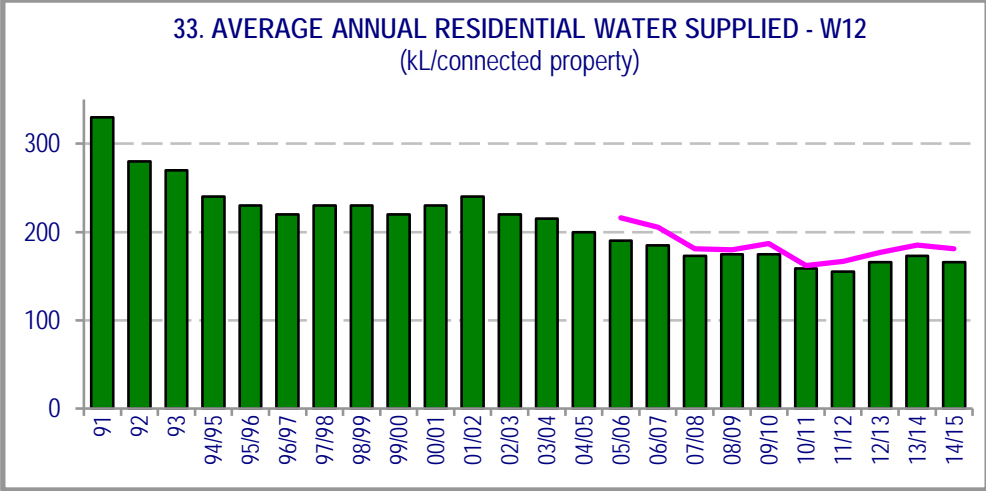
- Notes:**
- The Best-Practice Management outcomes which need to be implemented by LWUs are set out in "*Best-Practice Management of Water Supply and Sewerage Guidelines August 2007*" (BPMG).
  - There are 10 outcomes which must be implemented for water supply. These are (1), (2a), (2b), (2c), (2d), (2e), (3), (4), (5) and (6) shown in the table above for water supply.
  - There are 9 outcomes which must be implemented for sewerage. These are (1), (2a), (2b), (2c), (2d), (2e), (2f), (3) and (4) shown in the table above for sewerage.
  - The level of implementation of the 19 planning, pricing and management outcomes of the BPMG shown in the table above is from Notes 2 or 3 of the Special Purpose Financial Statements reported by each LWU in their Annual Financial Statements, supplemented by other data provided to DPI Water by the LWU. Documents which have implemented the required outcomes (including strategic business plans and IWCM evaluations and strategies) provided by LWUs to DPI Water by February 2016 are included in the results reported.
  - As shown above and in Table 8C on page 163, 48 LWUs have completed their 30-year IWCM Strategy (shown as 'YesC' in columns (6) and (4) above) for water supply and sewerage respectively. A further 21 LWUs have completed an IWCM Evaluation, and are shown as 'YesE' above. A further 12 LWUs are currently preparing their IWCM Evaluation and are shown as 'Yes' above. The IWCM Evaluations and Strategies have been reviewed by DPI Water and found to be soundly based. Similarly, the strategic business plans and trade waste policies shown as Yes above have been reviewed by DPI Water and found to be soundly based. However, the water conservation and drought management plans have only been briefly examined to confirm that they address the required issues.
  - The revenue for LWUs with water supply only or sewerage only is shown left justified above. For these LWUs, the relevant revenue to be classified as a "large LWU" is \$5M.
  - For requirement (2c) utilities with 4,000 or more connected properties which obtained 70% to 74% of residential revenue from usage charges are shown as Yes\*. Yes\* is also shown for Wyong and Essential Energy, whose prices are determined by IPART. Yes\*\* is shown for Eurobodalla which received 'deemed compliance' for its usage charge of \$3.48/kL, which is the second highest in NSW. In addition, the Minister has approved replacement of the 75% requirement with 70% for Eurobodalla (due to the high incidence of holiday houses, which are unoccupied for most of the year). Utilities with fewer than 4,000 connected properties serve 10% of the connected properties in regional NSW and are only required to achieve 50% for requirement (2c). Such utilities which have obtained 45% to 49% residential revenue from water usage charges are shown as Yes\*. 30 LWUs (64%) with 4,000 or more properties have met this requirement, as have 40 LWUs (87%) with fewer than 4,000 properties. Bulk water suppliers are not required to meet requirements (2b), (2c) or (2d) which refer to residential water tariffs.
  - Yes\* for requirement (1) indicates that as the strategic business plan and financial plan for these 51 LWUs are now over 4 years old, the LWU needs to prepare a new 30-year IWCM Strategy and financial plan in accordance with the July 2014 IWCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Similarly, the 17 LWUs whose IWCM Strategy is over 6 years old [shown as Yes\*] need to prepare such a new IWCM Strategy, financial plan and report [column 34 on page 116]. Refer also to pages 4 and 22.
  - Yes\* for requirement (2a) for water supply or for sewerage indicates that the LWU has significantly increased their 2015/16 charges in order to recover their costs.
  - Yes\* for requirement (2e) for water supply or for sewerage indicates that the LWU has commercial developer charges in place but is yet to complete and implement its Development Servicing Plan (DSP). Yes<sup>e</sup> for these requirements indicates the LWU is exempt from the requirement to prepare a DSP due to low growth (under 5 lots/a).
  - Yes\* for requirement (2f) for sewerage indicates that the LWU has adopted a trade waste policy before 2009, which needs significant updating.
  - As shown above, the overall levels of implementation of the outcomes of the Best-Practice Management Guidelines for water supply (for all 10 outcomes) were: 95% for LWUs with >10,000 properties; 93% for LWUs with 3,001 - 10,000 properties; 88% for LWUs with 1,501 - 3,000 properties and 84% for LWUs with 200 - 1,500 properties respectively. The overall level of implementation for water supply for all LWUs was 91%.
  - As shown above, the overall levels of implementation of the outcomes of the Best-Practice Management Guidelines for sewerage (for all 9 outcomes) were: 100% for LWUs with >10,000 properties; 93% for LWUs with 3,001 - 10,000 properties; 87% for LWUs with 1,501 - 3,000 properties and 77% for LWUs with 200 - 1,500 properties respectively. The overall level of implementation for sewerage for all LWUs was 89%.
  - The overall implementation of outcomes for water supply and sewerage was 90%.



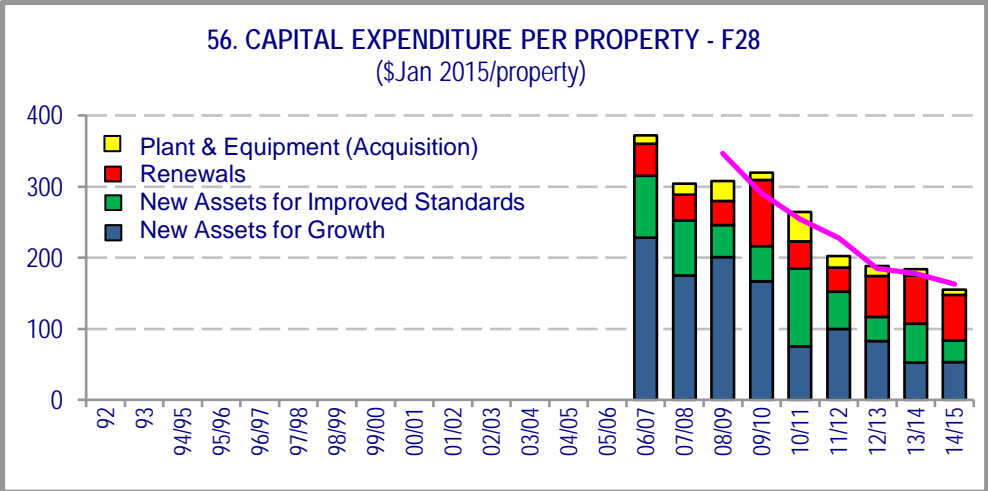
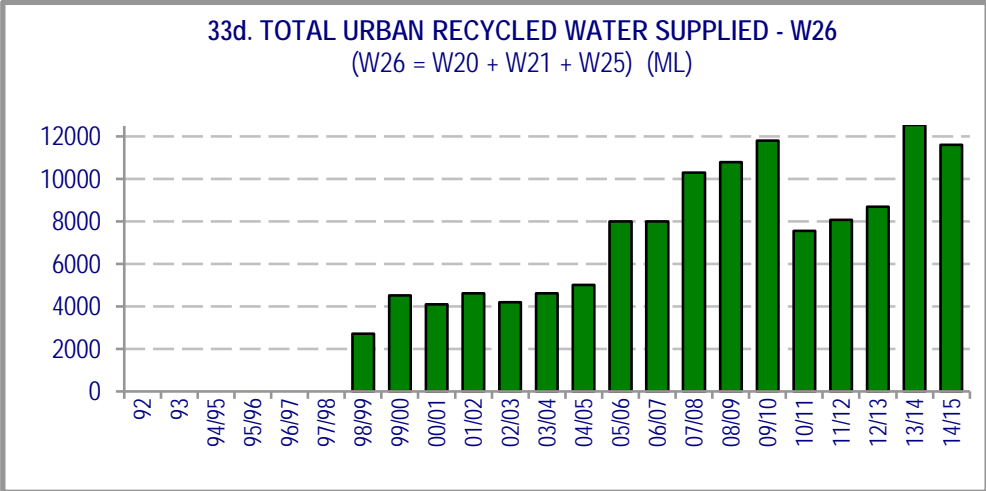
Table 4: Trends in statewide performance indicators - 1991 to 2014-15

Water supply

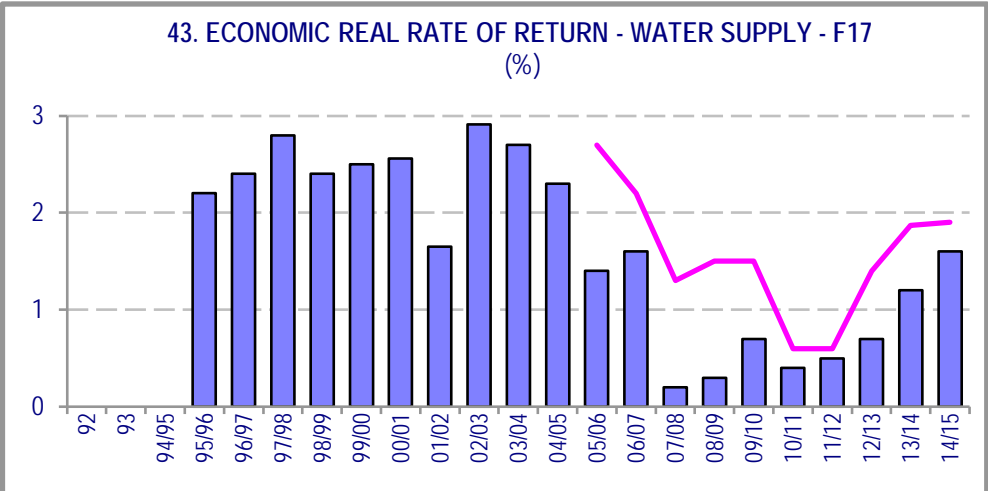
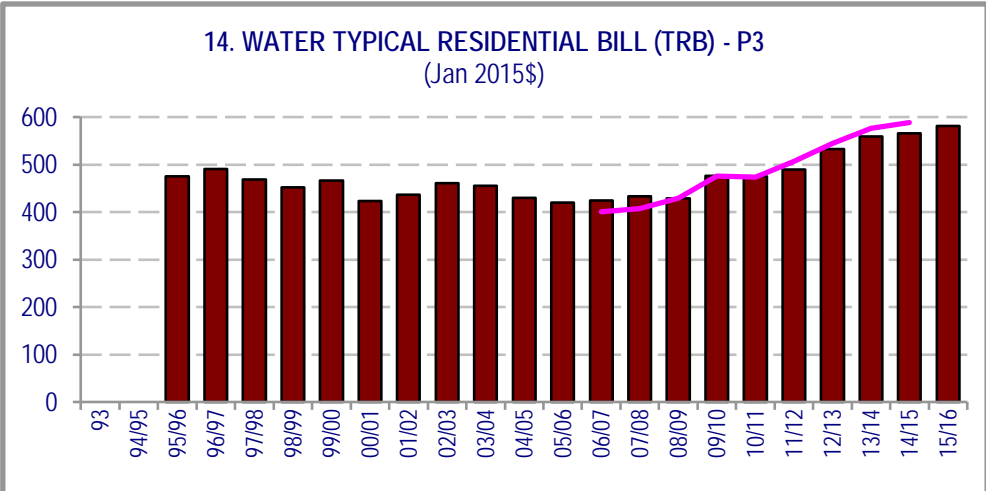
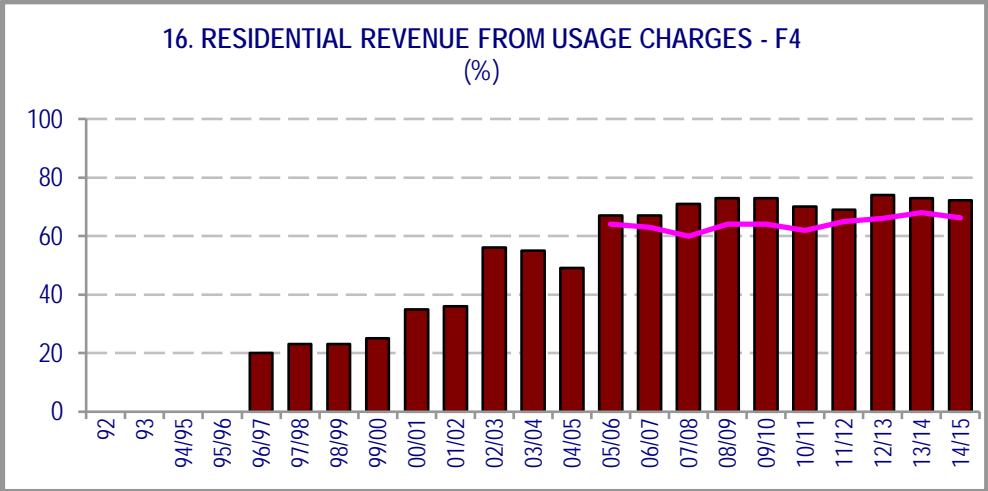
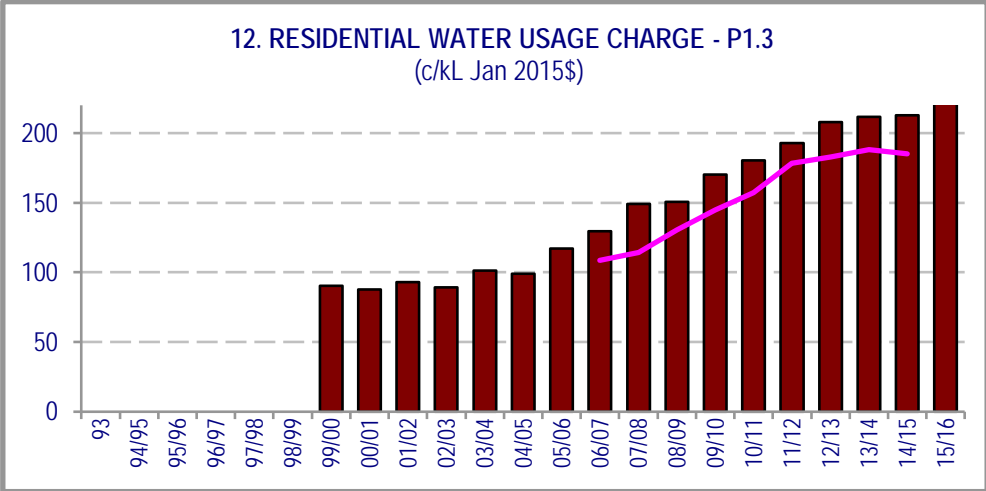
Water supplied



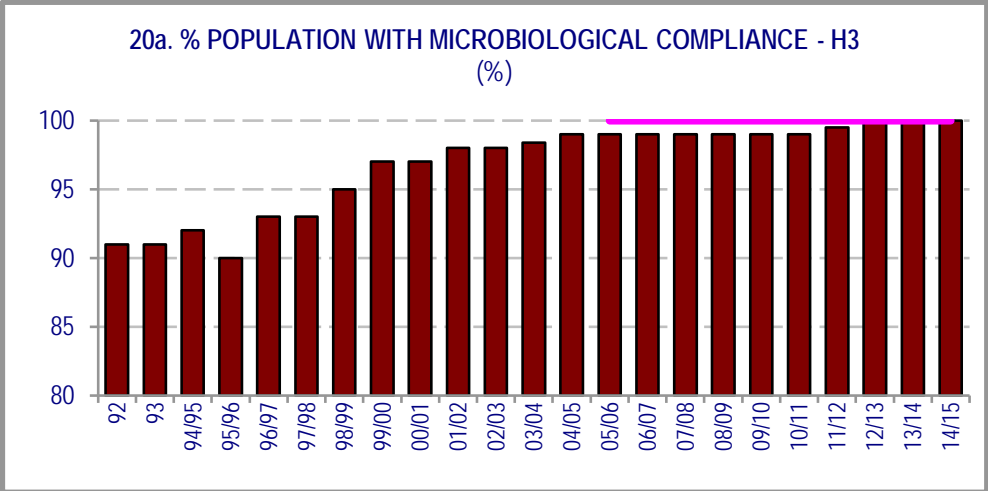
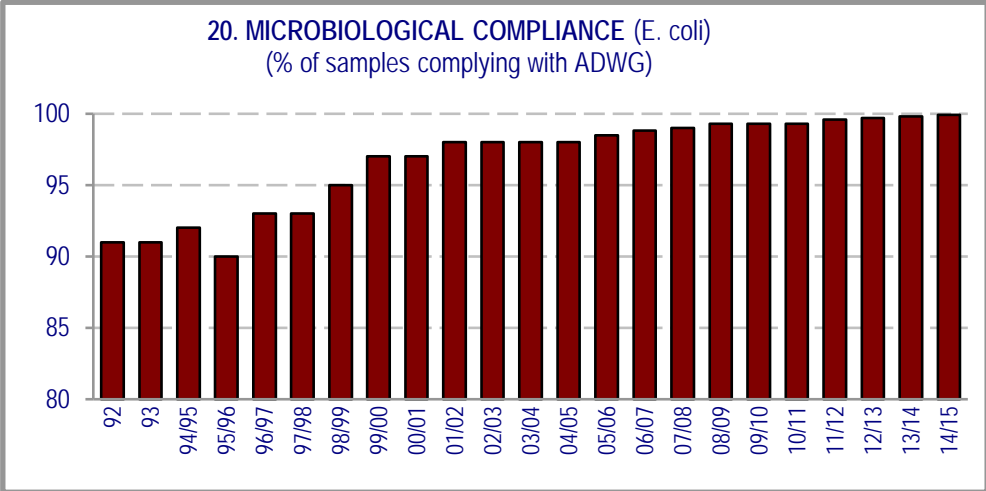
Water supplied / capital expenditure



Cost recovery



Health



**Water Supply Notes:**

1 Costs are in Jan 2015\$.

2 The figure numbers (eg. 33. Average Annual Residential Water Supplied) correspond to the indicator number in the TBL reports and in Table 1 on page 105. Where there is an equivalent NWI indicator (eg. W12), this is shown in the title.

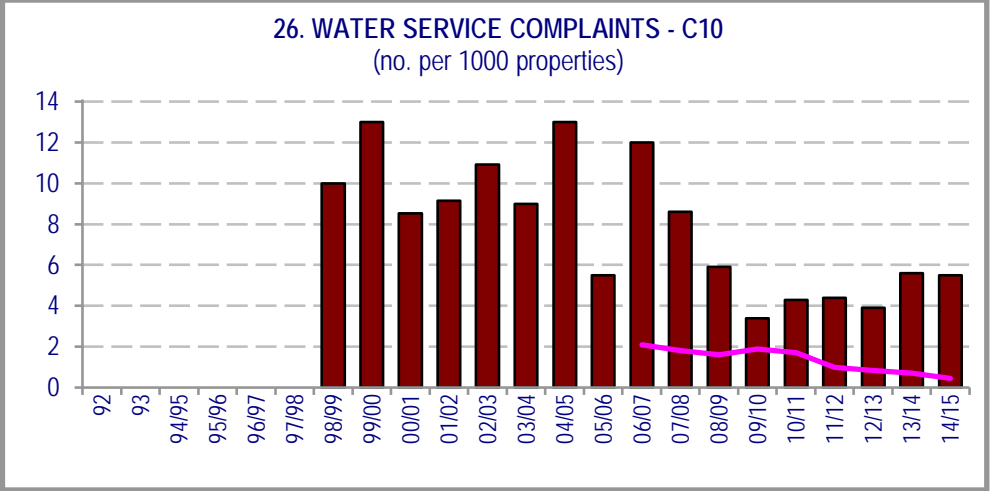
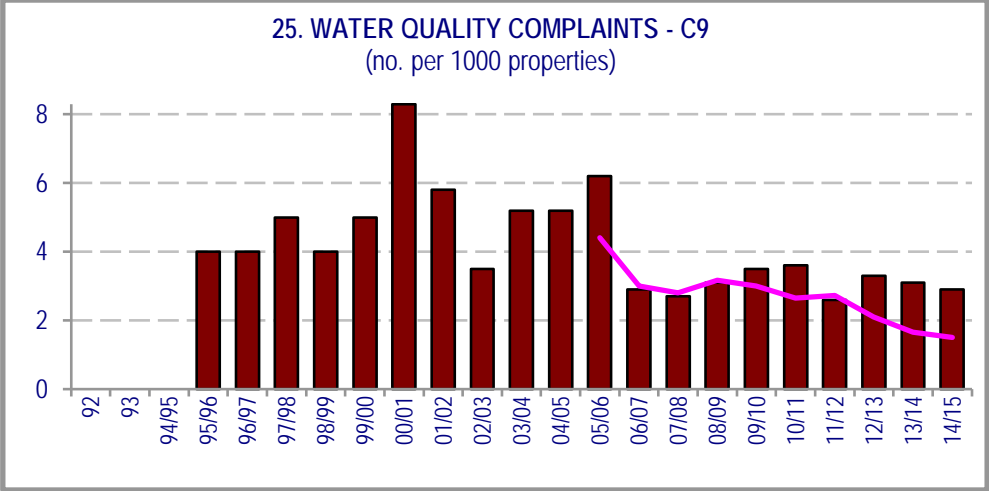
3 The figures show NSW Statewide medians (note 4 on page 32 ie. based on % of connected properties), except for figure 20 which is based on the total number of samples tested, figure 20a which is % of the 1.83m regional NSW population served by a potable water supply, figure 31 which is % of utilities, figure 33d which is total volume of recycled urban water supplied for regional NSW and figures 56, 49 and 49a which pro-rate the breakdown of the median on the basis of each year's expenditure by all LWUs.

4 The National Median for each financial year is the median value of the results published in the National Performance Report for Urban Water Utilities ([www.bom.gov.au](http://www.bom.gov.au)).

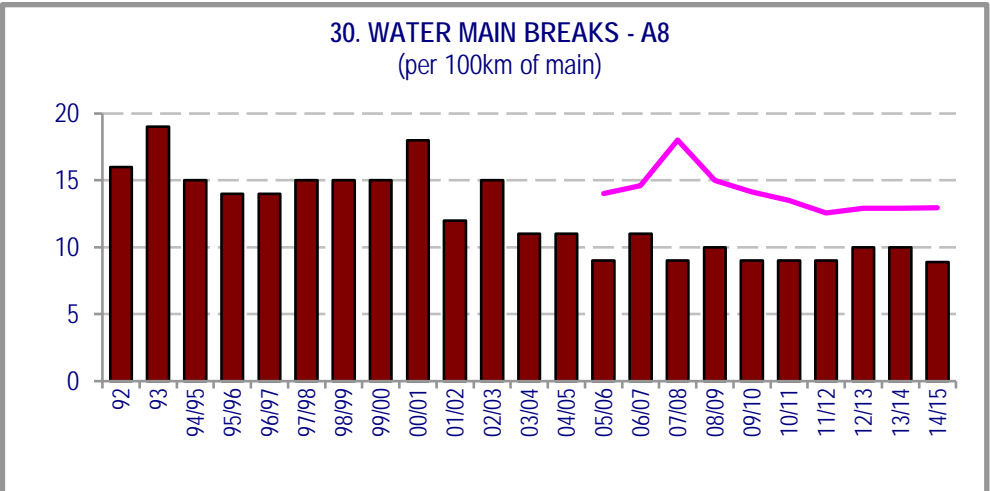
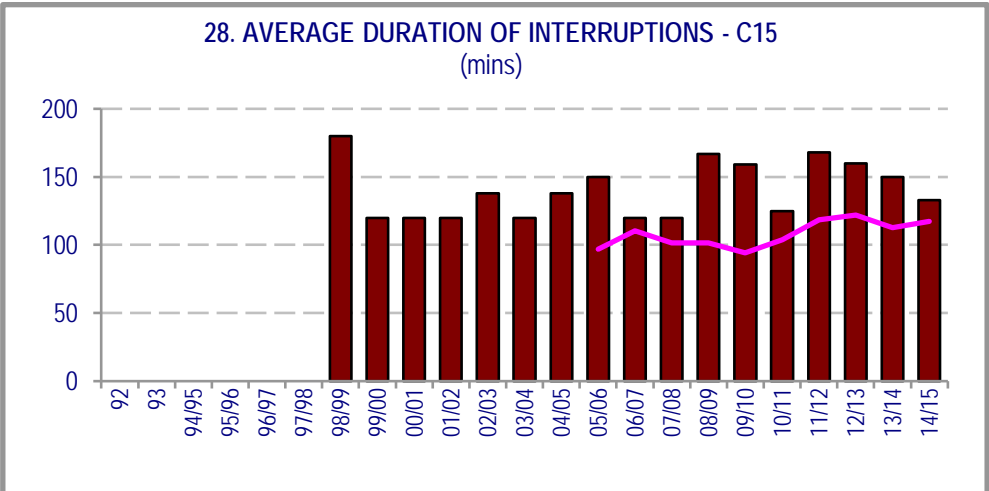
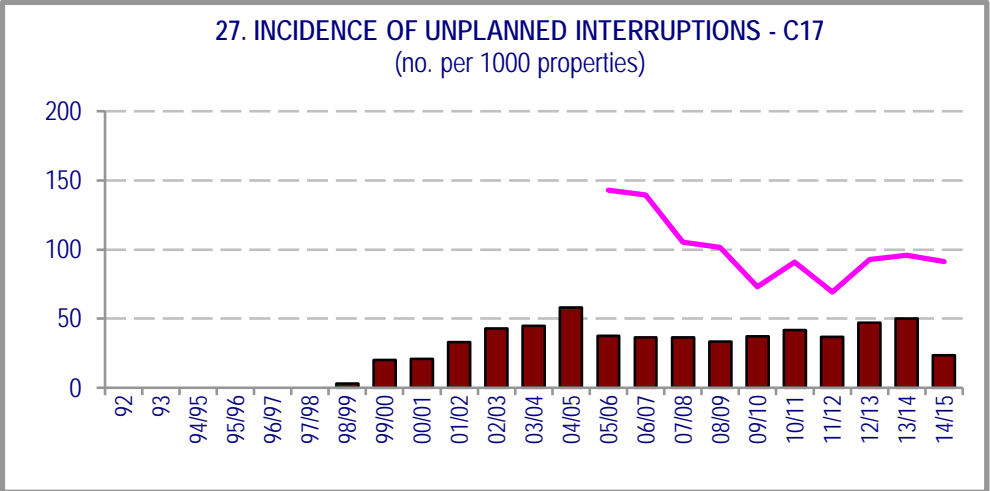
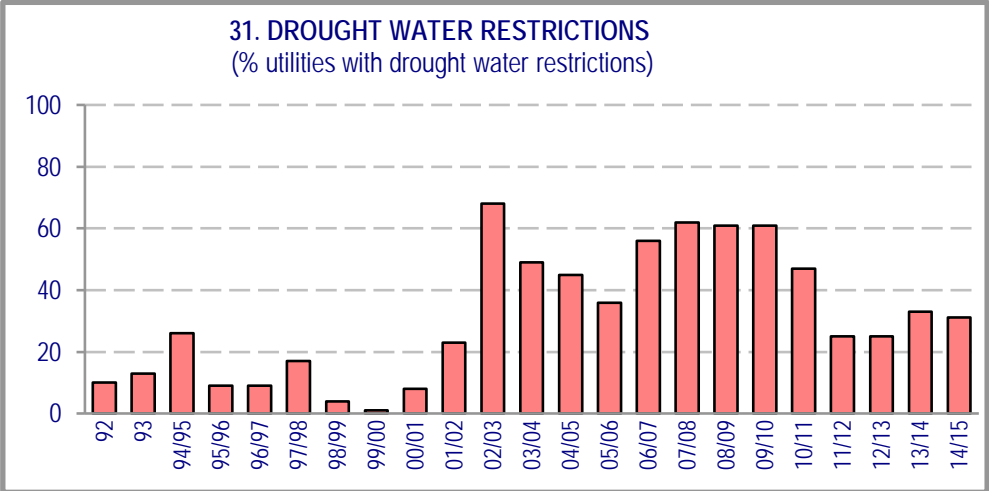
Table 4: Trends in statewide performance indicators - 1991 to 2014-15

Water supply (continued)

Customer service



Reliability



Efficiency

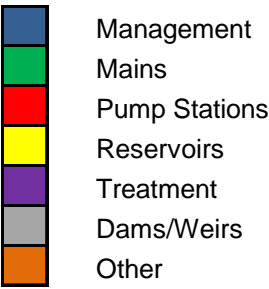
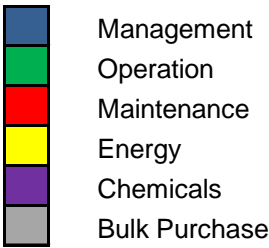
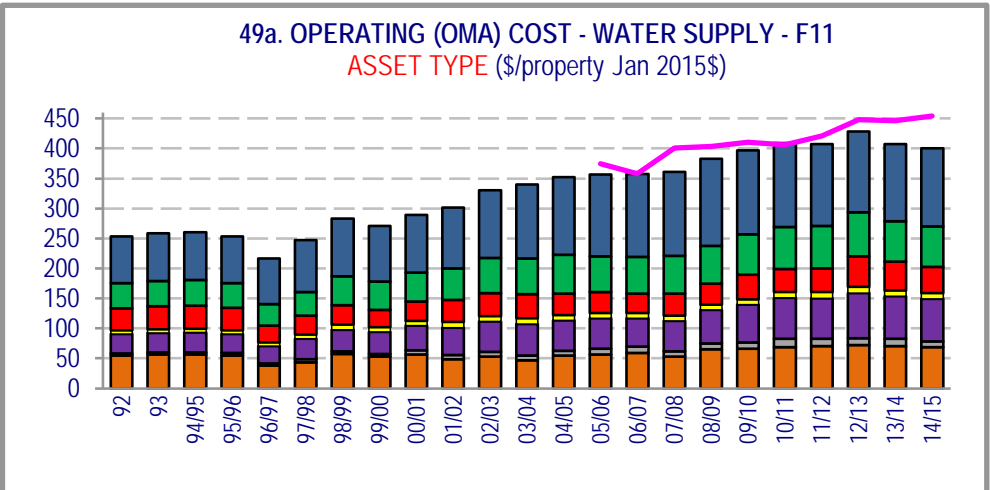
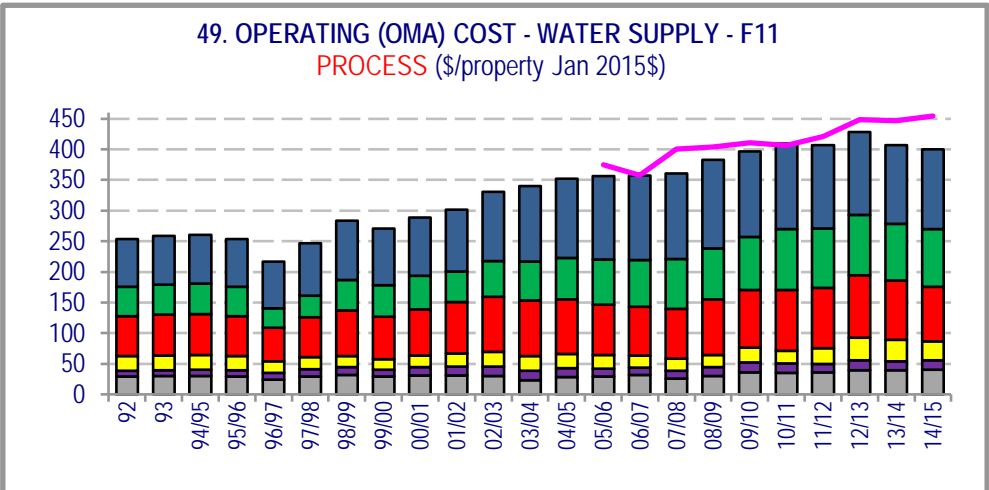
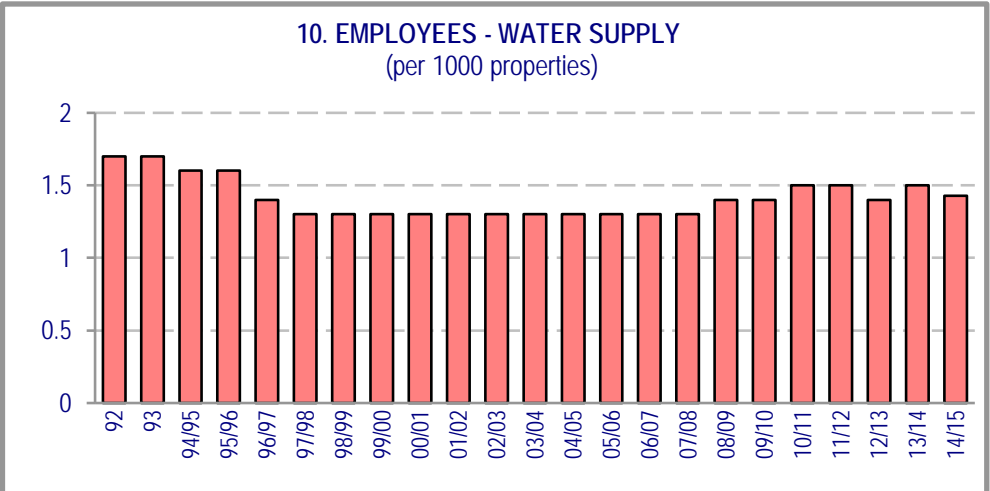
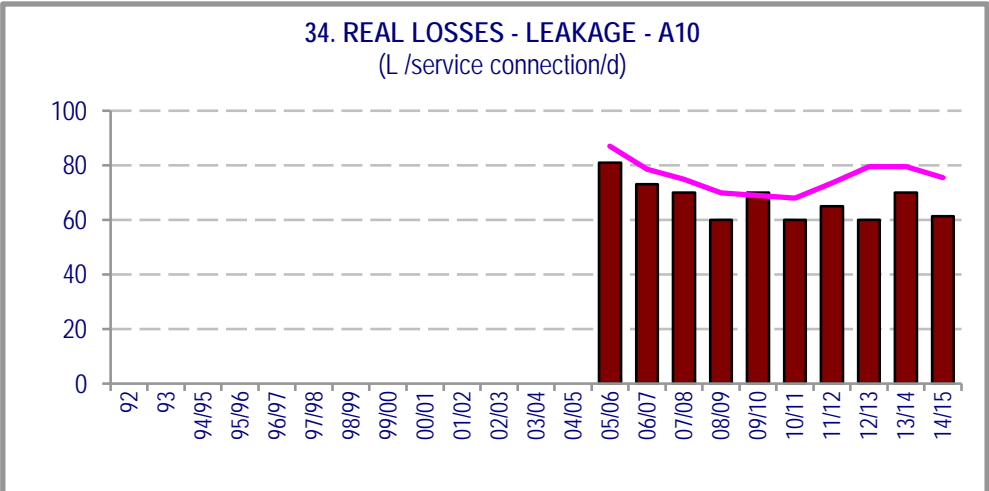
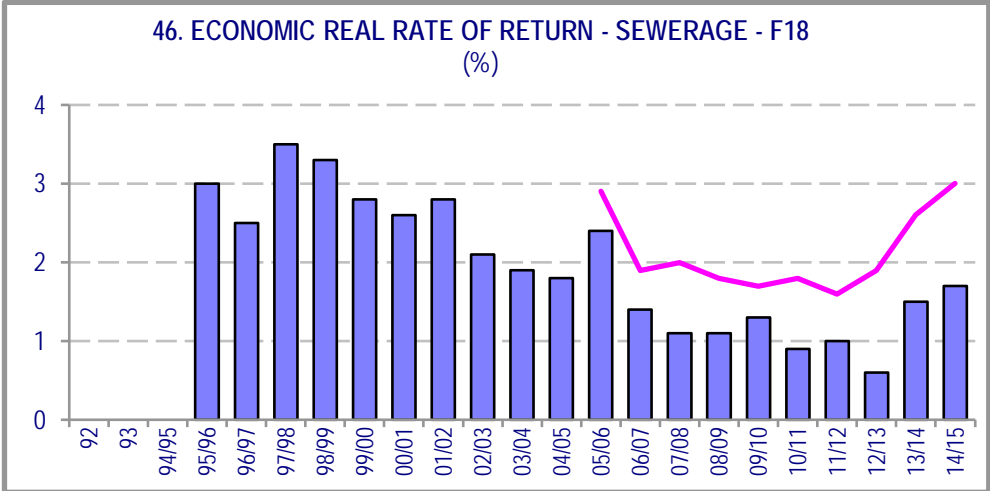
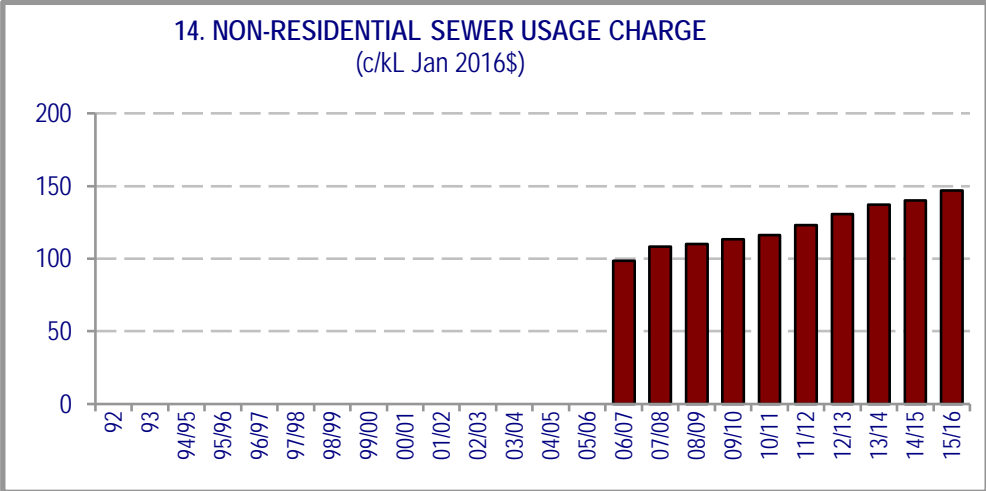
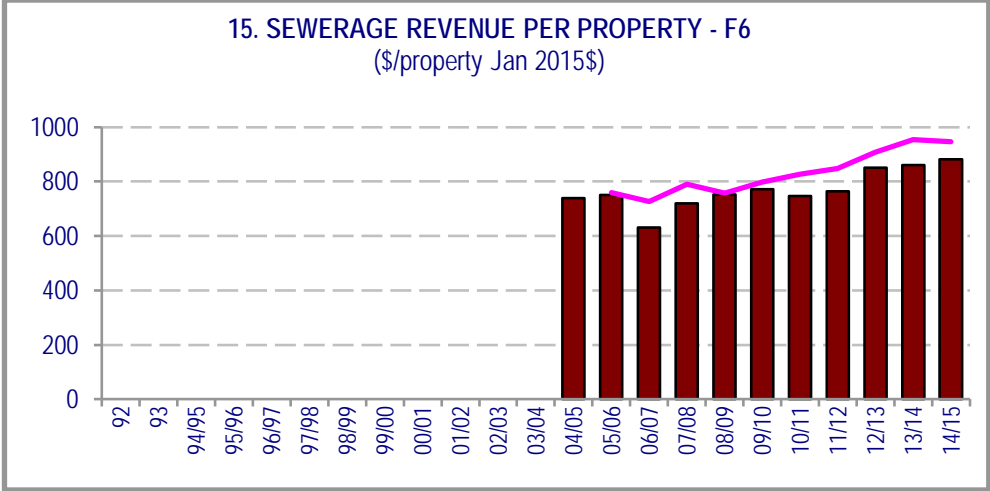
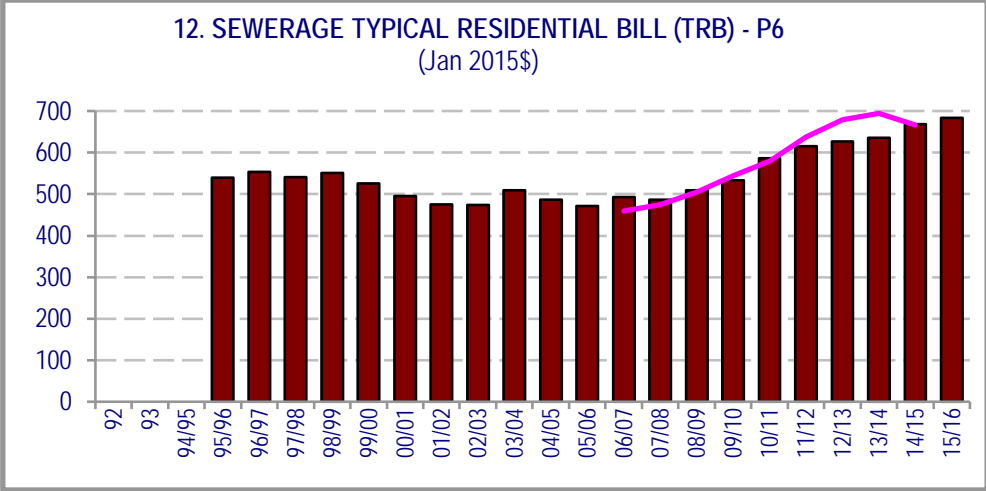


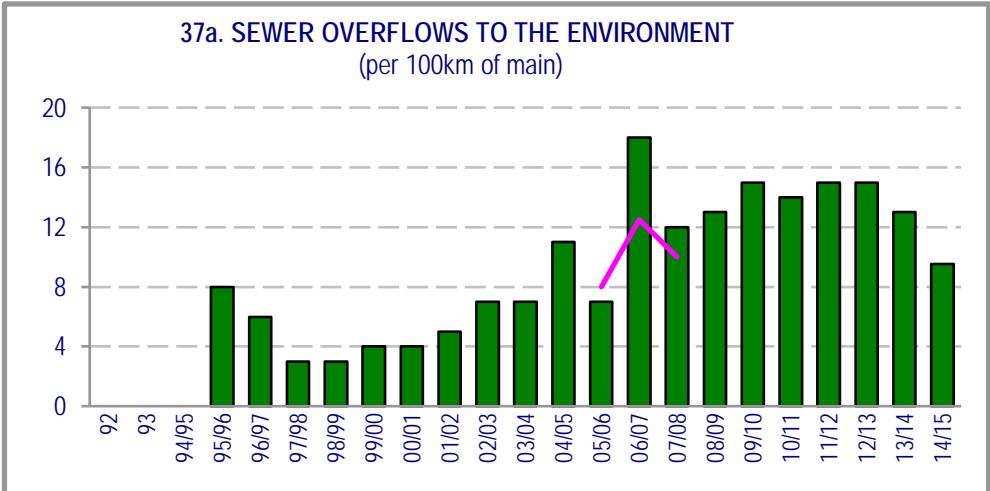
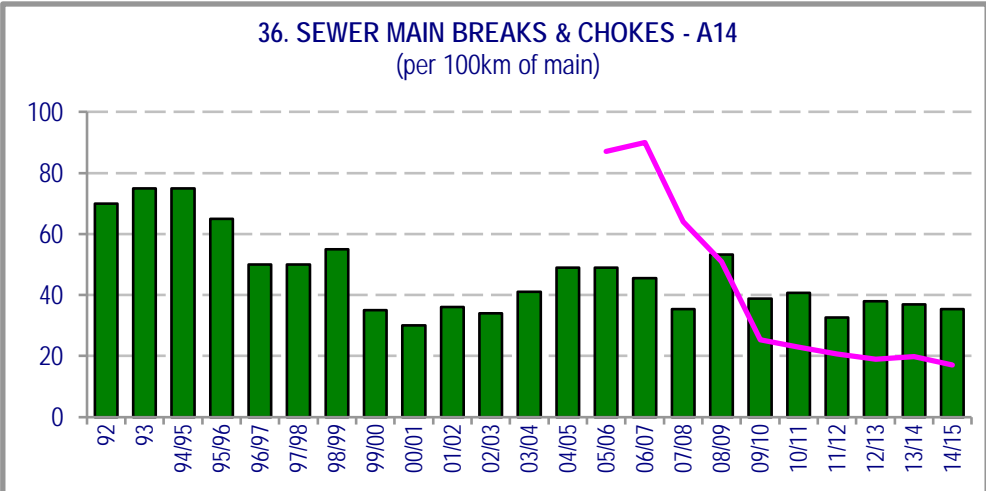
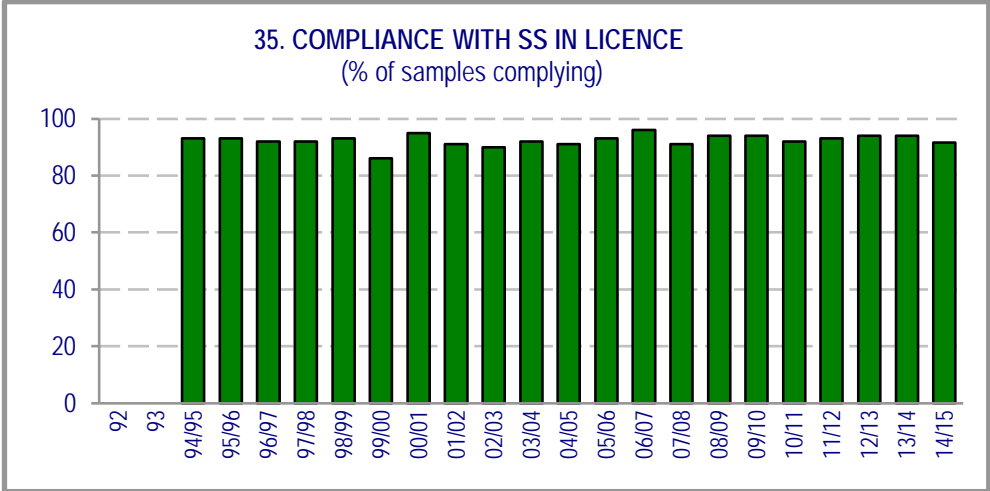
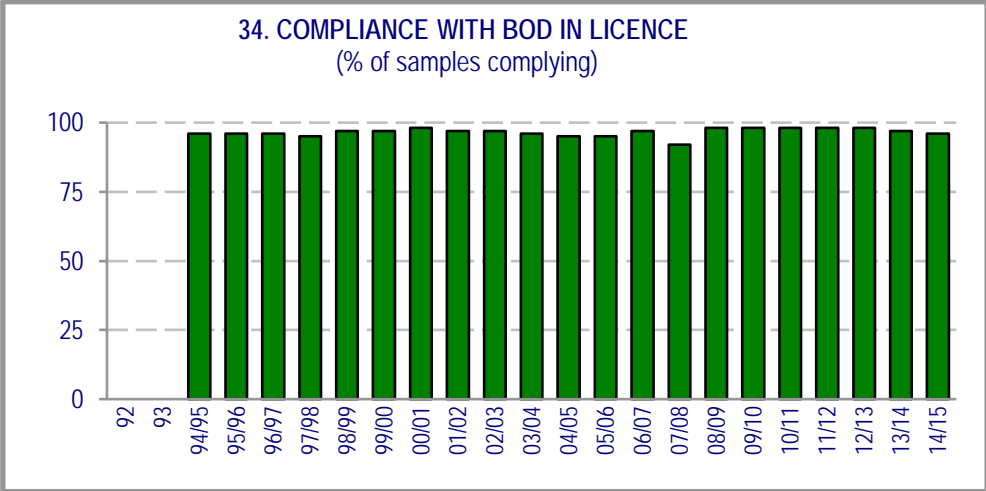
Table 4: Trends in statewide performance indicators - 1991 to 2014-15

Sewerage

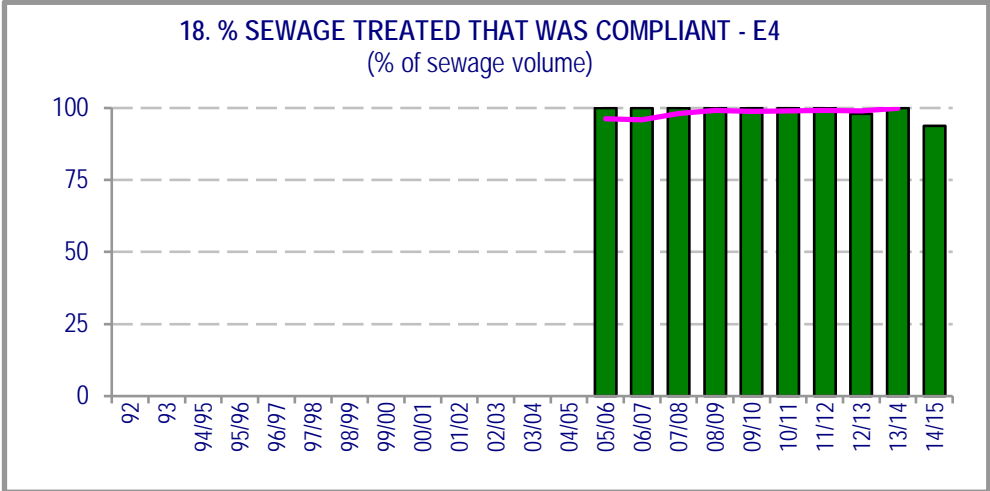
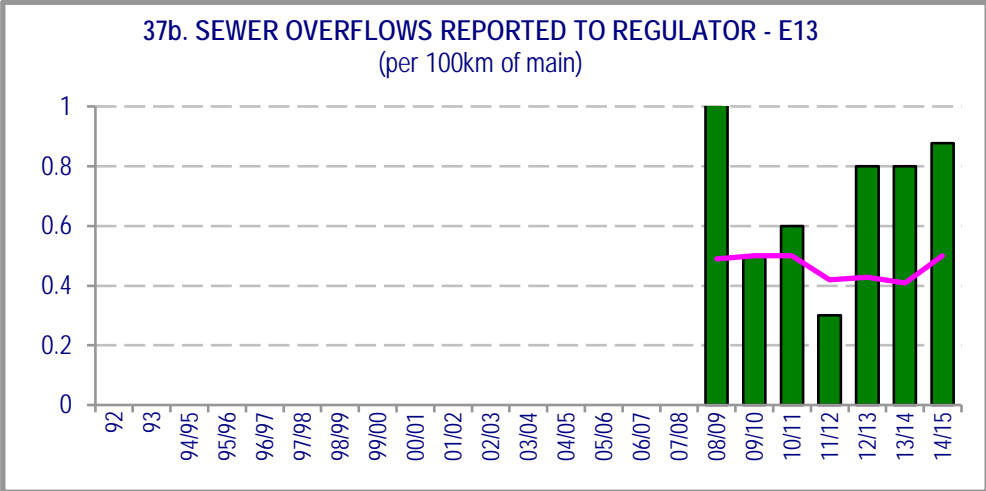
Charges / revenue



Environmental compliance



Environmental / health



**Sewerage Notes:**

1 Costs are in Jan 2015\$ except for figure 14, which is in Jan 2016\$.

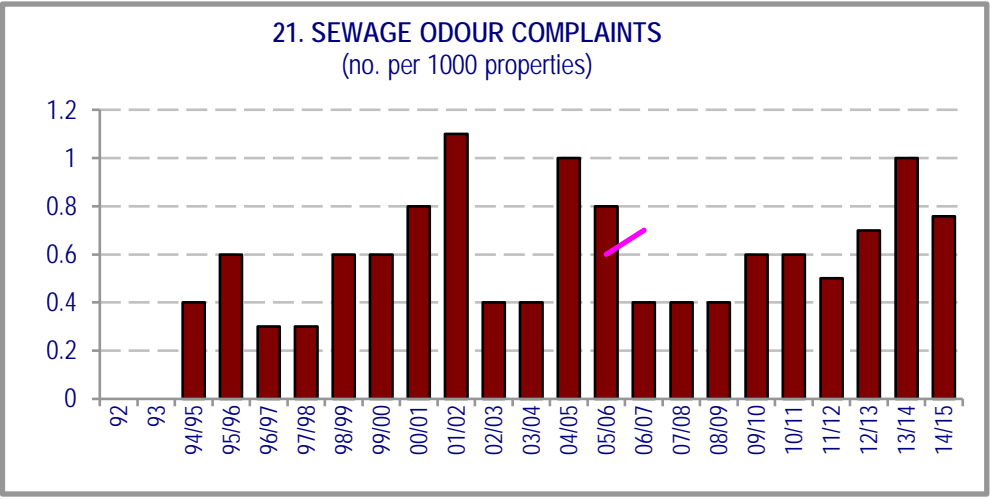
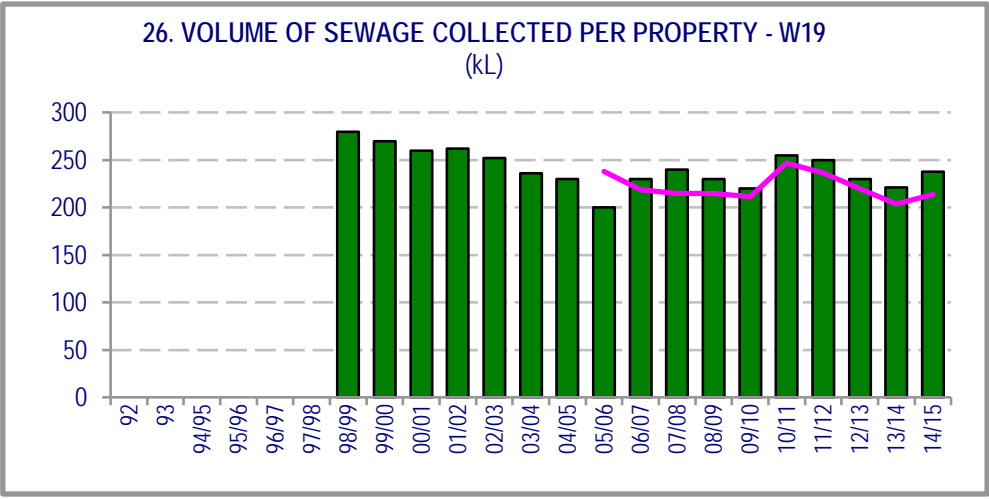
2 The figure numbers (eg. 12. Sewerage Typical Residential Bill) correspond to the indicator number in the TBL reports and in Table 2 on page 106. Where there is an equivalent NWI indicator (eg. P6), this is shown in the title.

3 The figures show NSW Statewide medians (note 4 on page 32, ie. based on % of connected properties), except for figures 34 & 35 which are % of samples tested, figure 26a which is the total volume of water recycled in regional NSW, figure 27 which is % of the total volume recycled in regional NSW as a percentage of the total volume of sewage collected and figures 56, 50 and 50a which pro-rate the breakdown of the median on the basis of each year's expenditure by all LWUs.

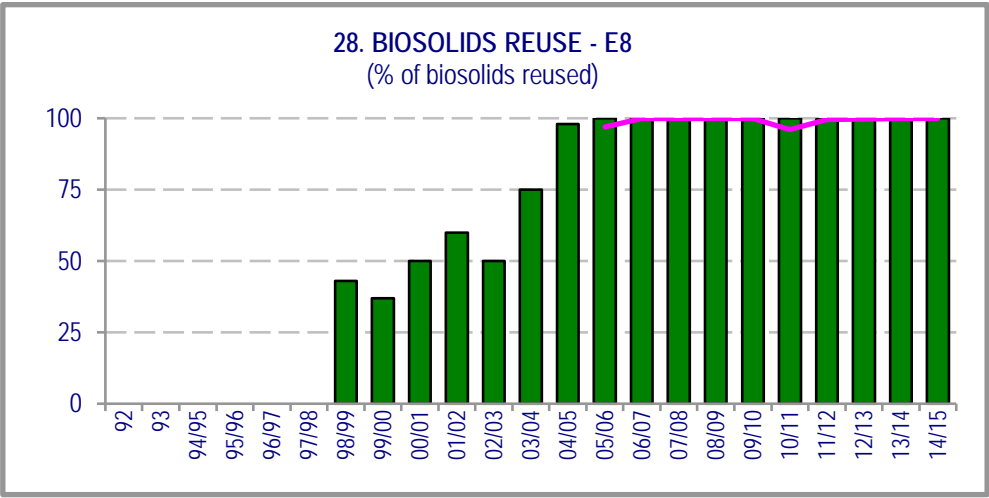
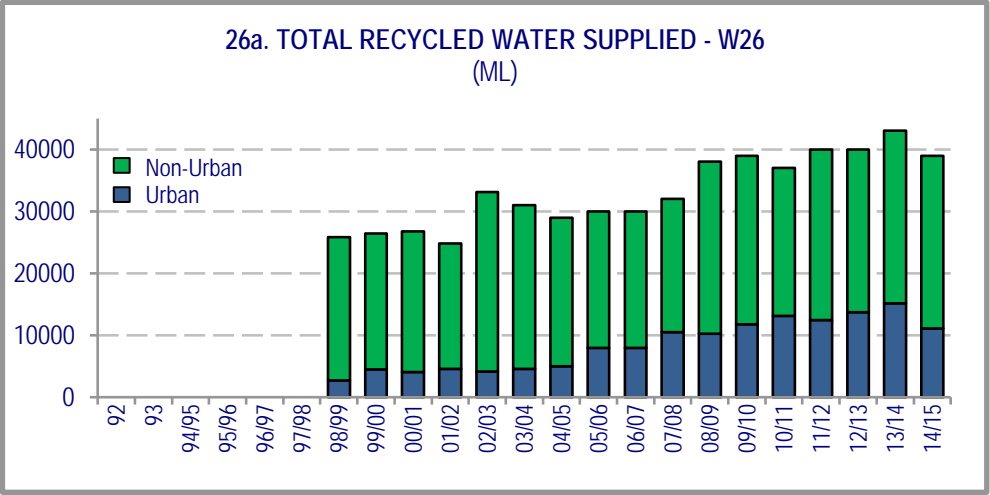
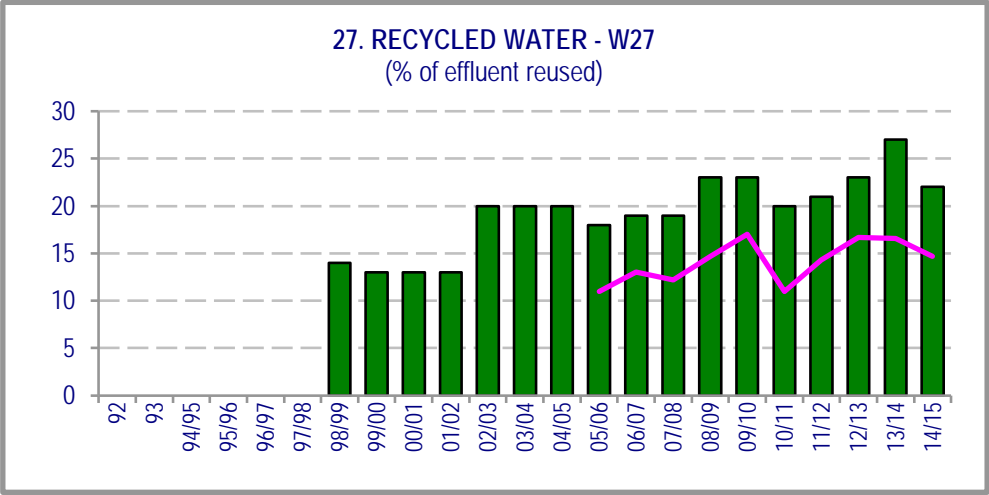
4 The National Median for each financial year is the median value of the results published in the National Performance Report for Urban Water Utilities ([www.bom.gov.au](http://www.bom.gov.au)).

Table 4: Trends in statewide performance indicators - 1991 to 2014-15  
Sewerage (continued)

Customer service



Resource management



Efficiency / capital expenditure

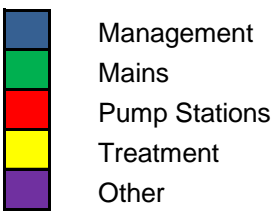
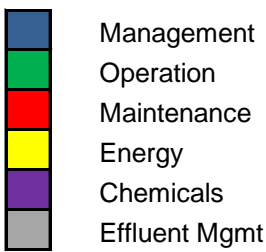
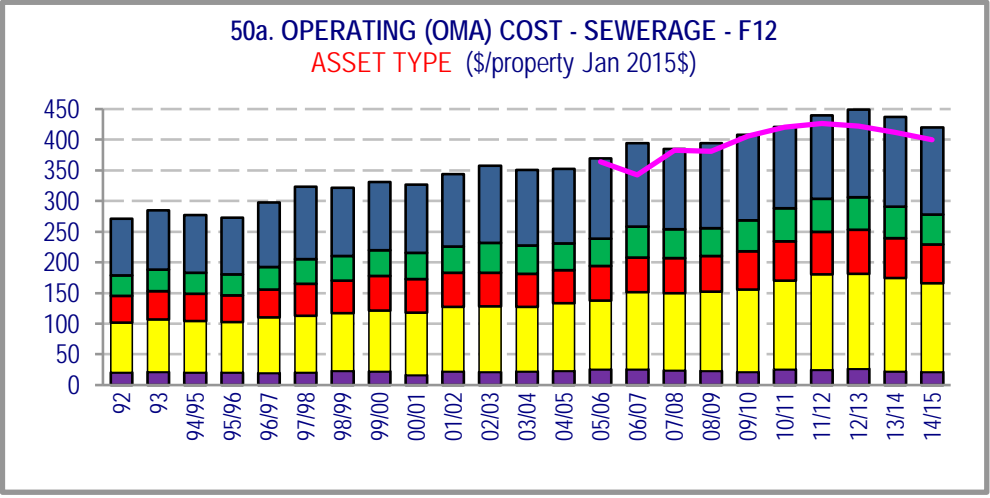
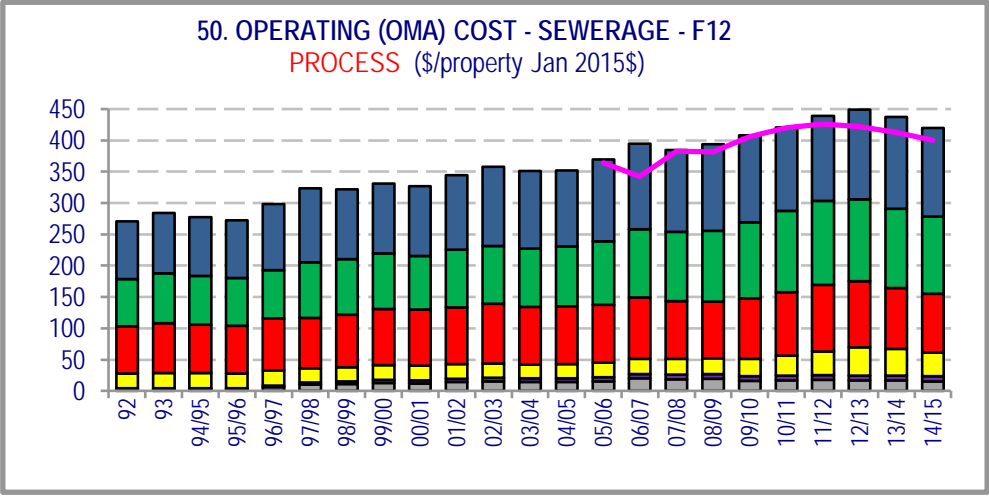
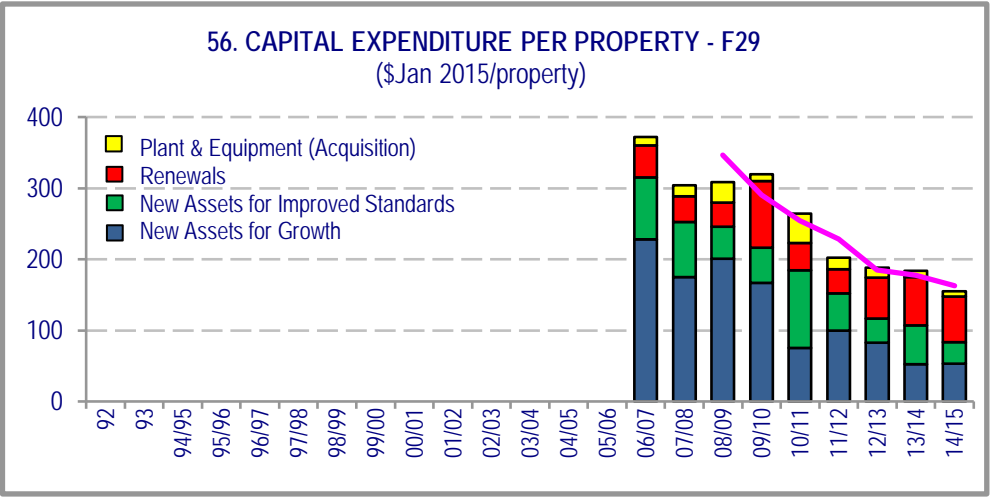
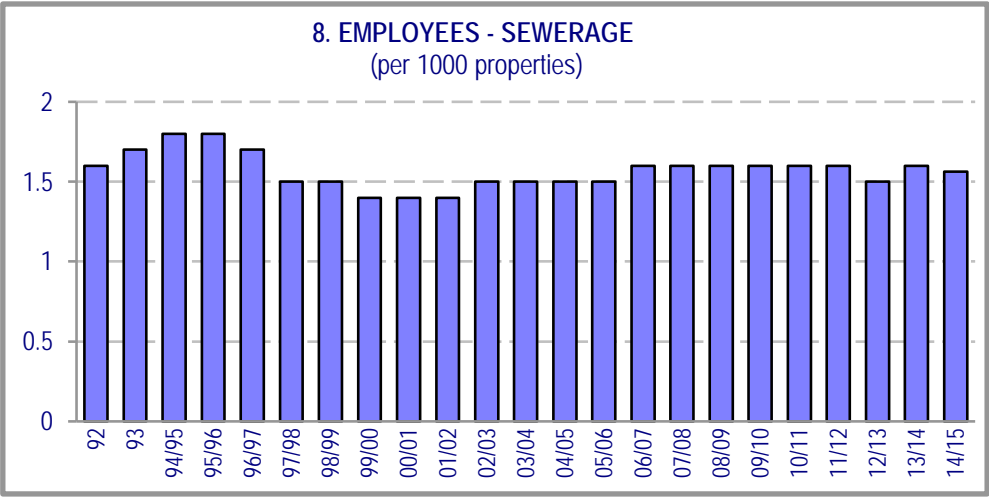
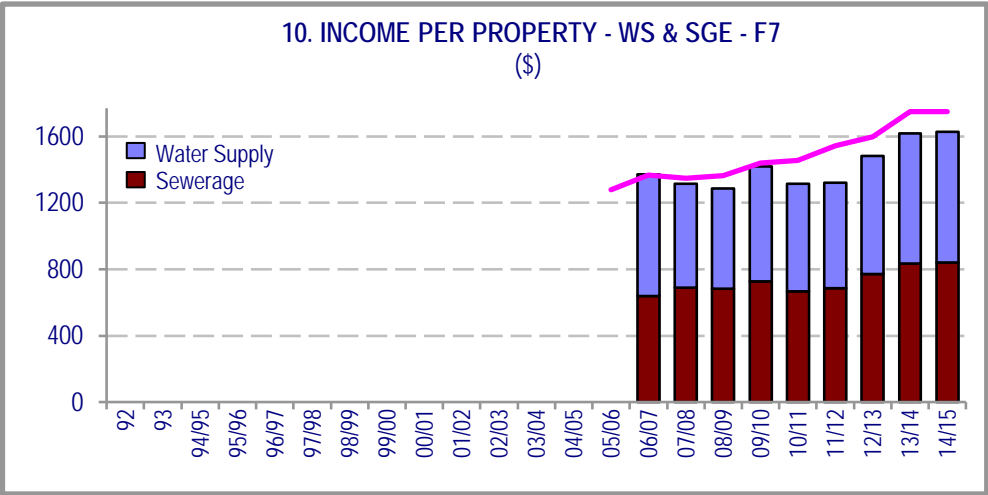
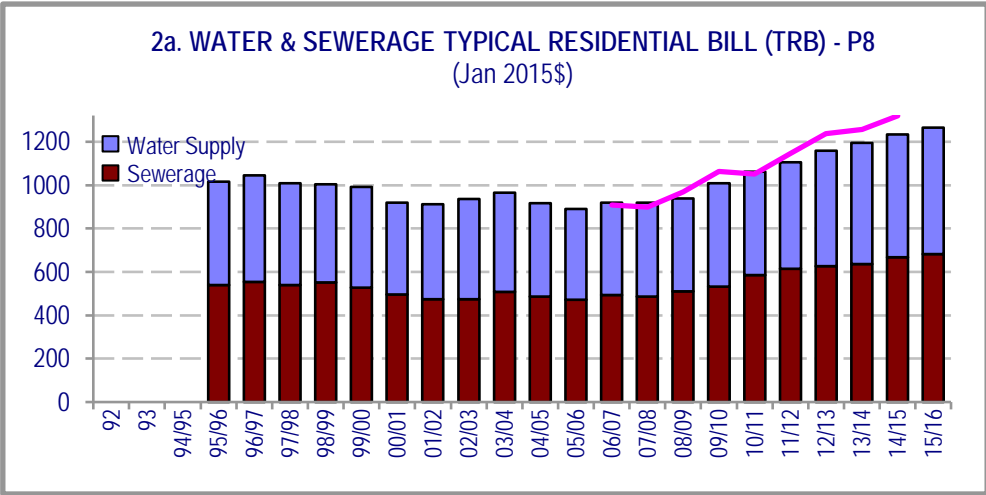


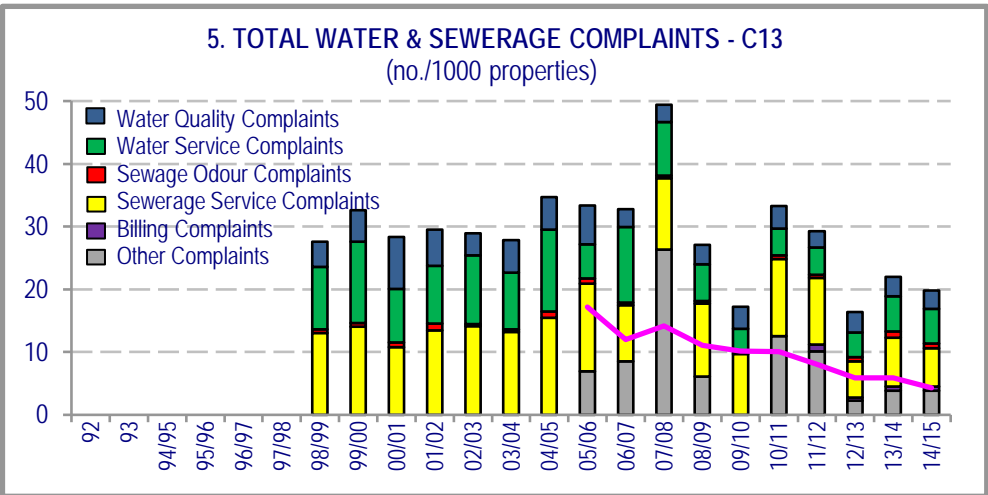
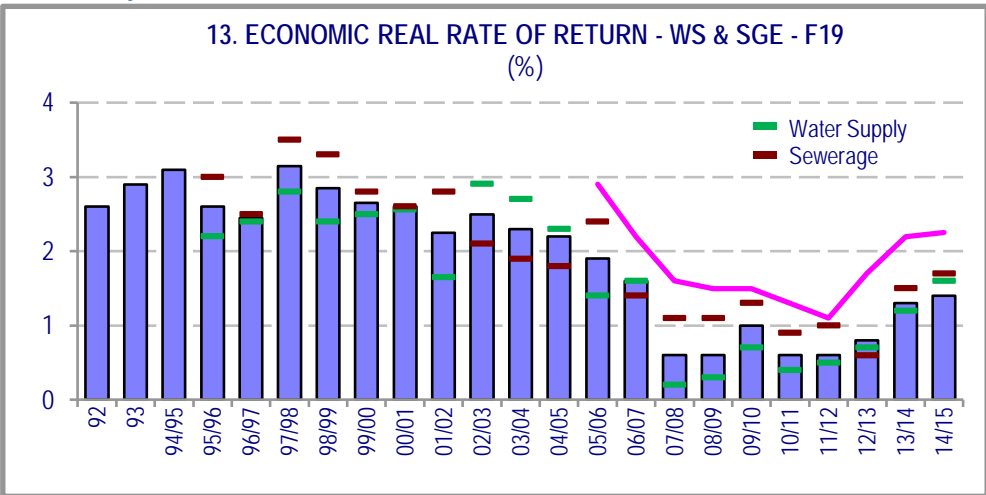
Table 4: Trends in statewide performance indicators - 1991 to 2014-15

Water supply & sewerage

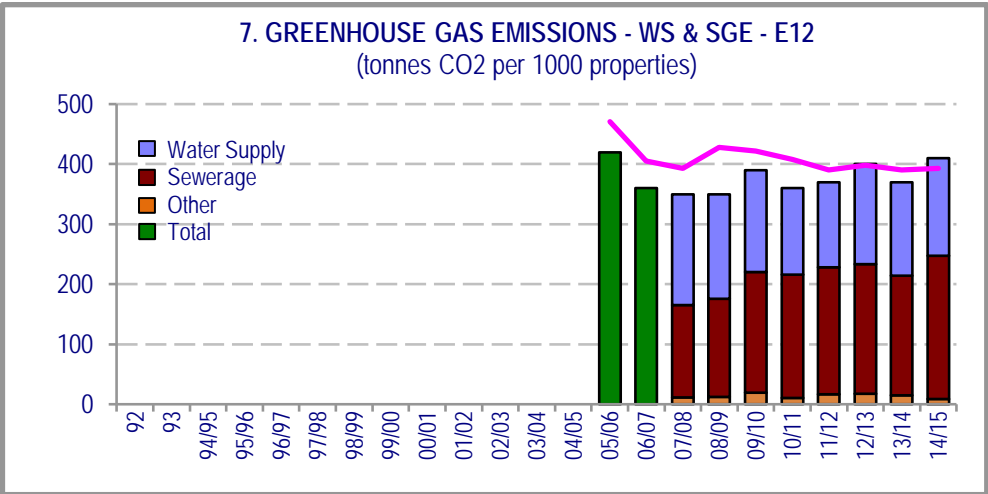
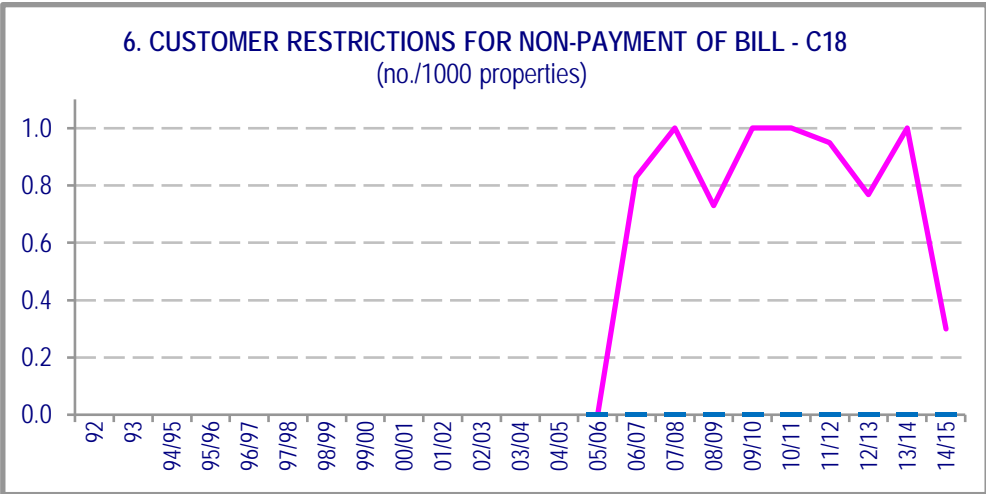
Cost recovery



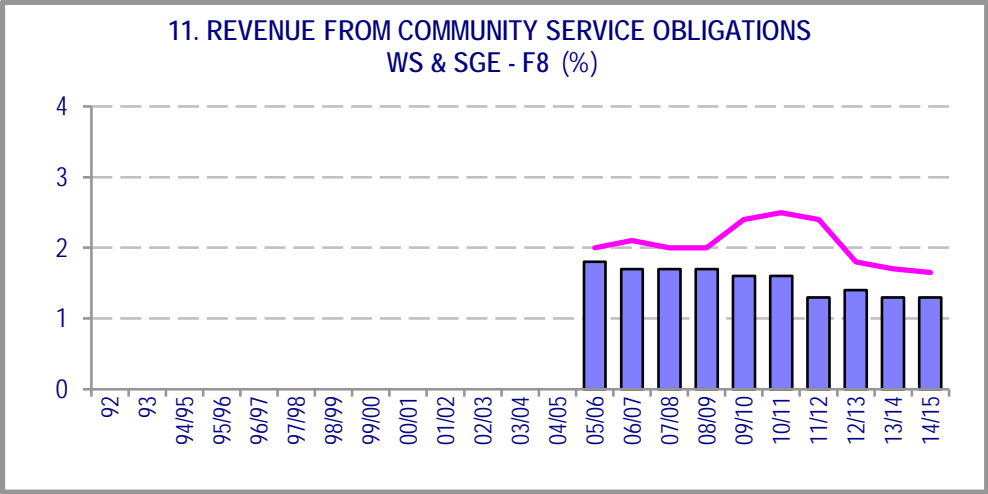
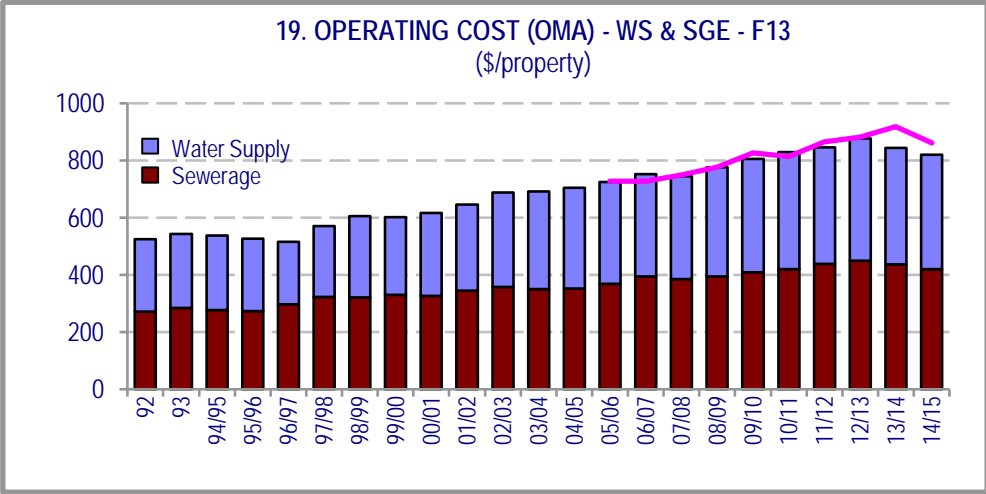
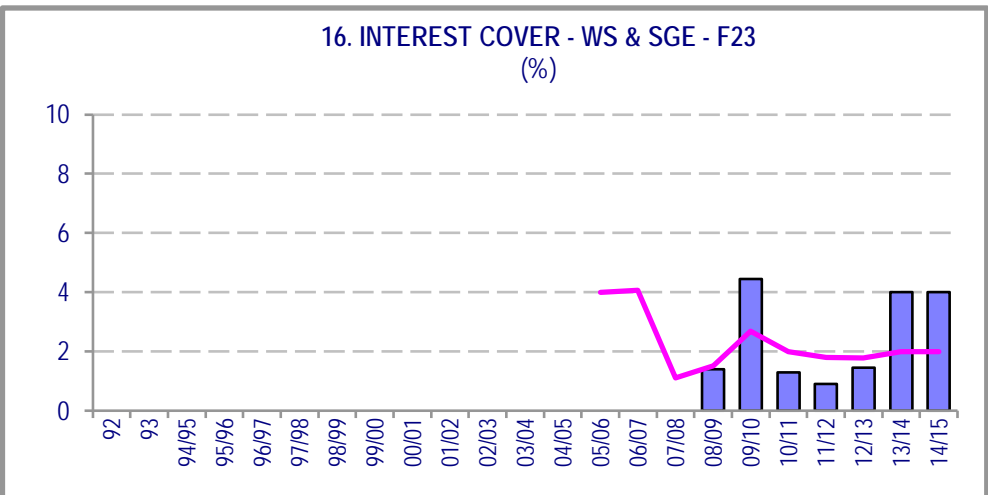
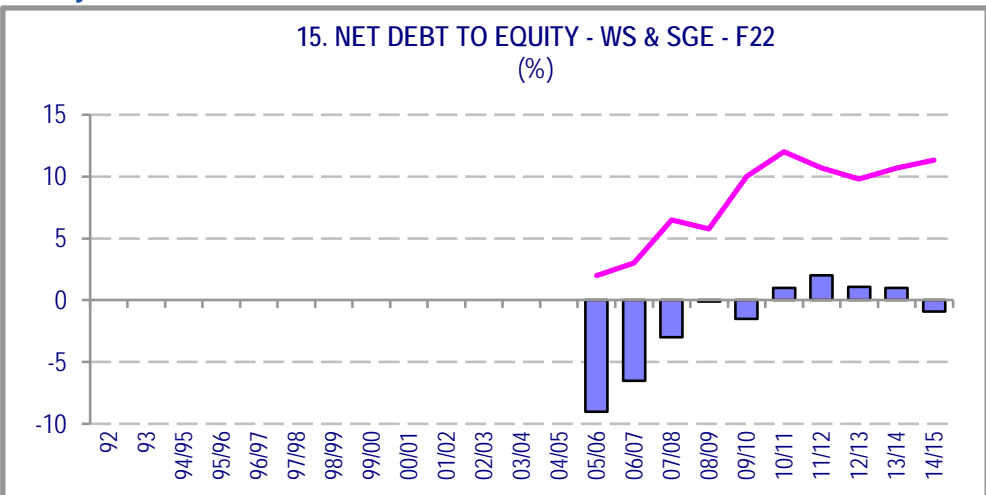
Cost recovery / customer service



Customer service / environmental



Efficiency



Water Supply and Sewerage Notes:

- 1 Costs are in Jan 2015\$.
- 2 The figure numbers (eg. 2a Water & Sewerage Typical Residential Bill ) correspond to the indicator number shown in Table 2A on page 107. The equivalent NWI indicator (eg. P8) is shown in the title.
- 3 The figures show NSW Statewide medians (ie. based on % of connected properties).
- 4 The National Median for each financial year is the median value of the results published in the National Performance Report for Urban Water Utilities ([www.bom.gov.au](http://www.bom.gov.au)).

LEGEND

National Medians



Table 5: 2014-15 NSW water utility performance summary

| WATER UTILITY  |                                | CHARACTERISTICS  |   | BILLS / PRICING  |                                 |                                  |                                       |  |   | HEALTH                               |   |                          |   | LEVELS OF SERVICE  |  |  |   | ENVIRONMENT   |  |  |   |  |                                     | FINANCIAL  |  |                       |                        |                              |                 |  |   | EFFICIENCY                      |  | BPM                          |      |
|--|--------------------------------|--|---|--|---------------------------------|----------------------------------|---------------------------------------|--|---|--------------------------------------|---|--------------------------|---|--|--|--|---|---|--|--|---|--|-------------------------------------|--|--|-----------------------|------------------------|------------------------------|-----------------|--|---|---------------------------------|--|------------------------------|------|
|  |                                | Water Supply Connected Properties<br><br>(No.) <sup>4</sup><br><br>(1)<br>C4 | Total Urban Water Supplied<br><br>(ML) <sup>2,3</sup><br><br>(2)<br>W11 | Residential Revenue from Usage Charges<br><br>(%)<br><br>(3)<br>F4 | Typical Residential Bill        |                                  |                                       | Typical Developer Charge<br><br>WS & SGE<br><br>(\$/ET)<br><br>(7) | Current Replacem ent Cost<br><br>WS & SGE<br><br>(\$/assmnt)<br><br>(8) | Water Quality Compliance (2011 ADWG) |   |                          |   | Water Quality Complaints<br><br>WS<br><br>(per 1000 props)<br><br>(13)<br>C9 | Avge Duration of Unplanned Interruption<br>WS<br><br>(mins)<br><br>(14)<br>C15 | Water Main Breaks<br><br>WS<br><br>(per 100km of Main)<br><br>(15)<br>A8 | Total Complaints<br>WS & SGE<br><br>(No./1000 props)<br><br>(16)<br>C13 | Average Annual Residential Water Supplied<br><br>(kL/connected prop)<br><br>(17)<br>W12 | Real Water Loss<br>WS<br><br>(L / connection / d)<br><br>(18)<br>A10 | Sge Treated that was Complia nt<br><br>(%)<br><br>(19)<br>E4 | Sge Mains Breaks & Chokes<br><br>(No. per 100km of main)<br><br>(20)<br>A14 | Effluent Recycled                            |                                     | Total Revenue<br>WS & SGE<br><br>(\$M) <sup>3,8</sup><br><br>(23)<br>F1+F2 | Net Debt to Equity<br>WS & SGE<br><br>(%)<br><br>(24)<br>F22 | Capital Expenditure   |                        | Economic Real Rate of Return |                 | Full Cost Recovery                     |   | Operating Cost OMA              |  | Best Practice Implementation |      |
|  |                                |  |   |  | WS<br><br>(\$)<br><br>(4)<br>P3 | SGE<br><br>(\$)<br><br>(5)<br>P6 | WS & SGE<br><br>(\$)<br><br>(6)<br>P8 |  |   | Achieved?<br><br>Note 12             | % Pop'n with Compliance<br><br>(10)<br>H3 | Achieved?<br><br>Note 11 | % Pop'n with Compliance<br><br>(12)<br>H4 |  |  |  |   |   |  |  |   | WS<br><br>(\$/prop)<br><br>(25)<br>F28 + F29 | SGE<br><br>(\$M)<br><br>(26)<br>F16 |  |  | WS<br><br>(27)<br>F17 | SGE<br><br>(28)<br>F18 | WS<br><br>(29)               | SGE<br><br>(30) | WS<br><br>(\$/prop)<br><br>(31)<br>F11 | SGE<br><br>(\$/prop)<br><br>(32)<br>F12 | WS & SGE<br><br>(%)<br><br>(33) | Strategic Business Plans Completed ?<br>Note 14 (Yes/No)<br><br>(34) |                              |      |
|  |                                |  |   |  |                                 |                                  |                                       |  |   |                                      |   |                          |   |  |  |  |   |   |  |  |   |  |                                     |  |  |                       |                        |                              |                 |  |   |                                 |  |                              |      |
|  |                                |  |   |  |                                 |                                  |                                       |  |   |                                      |   |                          |   |  |  |  |   |   |  |  |   |  |                                     |  |  |                       |                        |                              |                 |  |   |                                 |  |                              |      |
|  |                                |  |   |  |                                 |                                  |                                       |  |   |                                      |   |                          |   |  |  |  |   |   |  |  |   |  |                                     |  |  |                       |                        |                              |                 |  |   |                                 |  |                              |      |
|  | Sydney Water                   | 1,876,000  | 528,800   | 80   | 563                             | 592                              | 1,156                                 |  |   | Yes                                  | 100                                       | Yes                      | 100                                       | 0.2  | 147  | 26   | 3   | 201   | 74   |  | 69  | 8  | 43,075                              | 2,640  | 98   | 341                   | 628                    | 2.3                          | 1.4             |  |   | 386                             | 278  |                              |      |
|  | Hunter Water                   | 238,800  | 69,700  | 95   | 385                             | 623                              | 1,008                                 |  |   | Yes                                  | 100                                       | Yes                      | 100                                       | 3.0  | 136  | 29   | 6   | 168   | 91   |  | 54  | 6  | 4,600                               | 312  | 81   | 333                   | 77                     | 2.5                          | 1.7             |  |   | 270                             | 353  |                              |      |
|  | Water NSW                      |  |   |  |                                 |                                  |                                       |  |   |                                      |   |                          |   |  |  |  |   |   |  |  |   |  |                                     |  |  |                       |                        |                              |                 |  |   |                                 |  |                              |      |
| LWUs with > 10,000 Properties  |                                |  |   |  |                                 |                                  |                                       |  |   |                                      |   |                          |   |  |  |  |   |   |  |  |   |  |                                     |  |  |                       |                        |                              |                 |  |   |                                 |  |                              |      |
| 1  | Gosford                        | 71,830   | 15,360  | 73   | 507                             | 612                              | 1,119                                 | 4,260  | 44,800  | Yes                                  | 100                                       | Yes                      | 100                                       | 12   | 382  | 17   | 14  | 160   | 60   | 100  | 39  | 0  | 19                                  | 95.3   | 6  | 513                   | 36.1                   | 1.3                          | 0.3             | Y                                      | Y                                       | 331                             | 379  | 100                          | Yes+ |
| 2  | Wyong                          | 63,490   | 14,400  | 67*  | 508                             | 471                              | 979                                   | 8,560  | 39,200  | Yes                                  | 100                                       | Yes                      | 100                                       | 10   | 133  | 16   | 29  | 150   | 30   | 100  | 49  | 5  | 759                                 | 87.8   | 9  | 435                   | 27.4                   | 1.5                          | 0.2             | Y                                      | Y                                       | 319                             | 336  | 100                          | Yes* |
| 3  | Shoalhaven                     | 47,150   | 14,200  | 75*  | 309                             | 750                              | 1,059                                 | 14,900   | 26,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.5  | 135  | 8  | 2   | 143   | 90   | 94   | 11  | 21   | 1,705                               | 73.5   | -1   | 513                   | 22.6                   | 1.7                          | 3.9             | Y                                      | Y                                       | 276                             | 500  | 100                          | Yes+ |
| 4  | Rous (BS) (NO SGE)             | 41,230   | 1,310   |  |                                 |                                  |                                       | 9,090  |   | Yes                                  | 100                                       | Yes                      | 100                                       | 0.0  | 237  | 10   |   |   |  |  |   |  |                                     | 23.0   | 5  |                       | 12.1                   | 1.8                          |                 | Y                                      |   | 268                             |  | 100                          | Yes* |
| 5  | MidCoast                       | 38,710   | 9,160   | 72   | 587                             | 948                              | 1,535                                 | 15,400   | 34,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 3  |  | 9  | 11  | 142   | 60   | 98   | 6   | 14   | 941                                 | 71.0   | 22   | 185                   | 6.8                    | 0.7                          | 2.6             | Y                                      | Y                                       | 477                             | 543  | 100                          | Yes* |
| 6  | Tweed                          | 32,240   | 9,170   | 75*  | 584                             | 732                              | 1,316                                 | 19,100   | 42,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 6  | 134  | 4  | 29  | 178   | 60   | 100  | 0   | 7  | 551                                 | 62.3   | 0  | 225                   | 7.0                    | 1.6                          | 1.1             | Y                                      | Y                                       | 419                             | 524  | 100                          | Yes* |
| 7  | Port Macquarie-Hastings (UF)   | 30,420   | 6,610   | 68   | 568                             | 736                              | 1,304                                 | 13,300   | 31,700  | Yes                                  | 100                                       | Yes                      | 100                                       | 6  | 210  | 3  | 32  | 151   | 40   | 100  | 16  | 5  | 386                                 | 51.3   | -8   | 540                   | 15.9                   | 1.2                          | 1.5             | Y                                      | Y                                       | 398                             | 480  | 95                           | Yes* |
| 8  | Riverina (GW) (NO SGE)         | 29,870   | 15,620  | 74   | 574                             |                                  |                                       | 4,930  | 11,500  | Yes                                  | 100                                       | Yes                      | 100                                       | 3  | 185  | 7  | 7   | 311   | 90   |  |   |  |                                     | 30.5   | -9   | 397                   | 11.9                   | 7.5                          |                 | Y                                      |   | 271                             |  | 90                           | Yes  |
| 10   | Coffs Harbour                  | 25,060   | 6,100   | 76*  | 582                             | 806                              | 1,388                                 | 19,900   | 41,700  | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 120  | 3  | 1   | 167   | 50   | 100  | 89  | 14   | 1,013                               | 50.7   | 13   | 586                   | 14.0                   | 2.0                          | 0.1             | Y                                      | Y                                       | 395                             | 619  | 100                          | Yes+ |
| 11   | Albury                         | 25,700   | 7,630   | 75   | 354                             | 639                              | 993                                   | 7,000  | 29,800  | Yes                                  | 100                                       | Yes                      | 100                                       | 3  | 137  | 5  | 6   | 205   | 50   | 63   | 65  | 54   | 2,398                               | 37.7   | -6   | 166                   | 4.1                    | 1.9                          | 4.1             | Y                                      | Y                                       | 277                             | 393  | 100                          | Yes* |
| 12   | Fish River WS (UF,BS) (NO SGE) | 23,500   | 2,700   |  |                                 |                                  |                                       |  |   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 600  | 6  |   |   |  |  |   |  |                                     | 10.0   |  |                       | 0.0                    |                              |                 | Y*                                     |   |                                 |  | 83                           | Yes* |
| 13   | Tamworth Regional              | 21,680   | 7,970   | 55   | 515                             | 758                              | 1,273                                 | 6,560  | 31,800  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.0  |  | 14   | 59  | 188   | 70   | 100  | 50  | 82   | 4,278                               | 41.6   | -4   | 428                   | 9.0                    | 2.0                          | 3.2             | Y                                      | Y                                       | 518                             | 425  | 95                           | Yes* |
| 14   | Clarence Valley                | 21,460   | 6,280   | 66   | 413                             | 988                              | 1,401                                 | 12,800   | 41,500  | Yes                                  | 100                                       | Yes                      | 100                                       | 14   | 120  | 11   | 109   | 147   | 110  | 92   | 52  | 7  | 195                                 | 32.9   | 11   | 1,693                 | 25.5                   | 0.4                          | 2.5             | Y                                      | Y                                       | 388                             | 462  | 95                           | Yes+ |
| 15   | Eurobodalla                    | 19,580   | 3,520   | 58   | 668                             | 865                              | 1,533                                 | 21,700   | 40,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.7  | 220  | 13   | 1   | 114   | 50   | 100  | 32  | 7  | 243                                 | 36.3   | -1   | 349                   | 6.5                    | 1.1                          | 1.7             | Y                                      | Y                                       | 405                             | 501  | 100                          | Yes+ |
| 16   | Wingecarribee                  | 19,150   | 4,540   | 68   | 463                             | 739                              | 1,202                                 | 14,700   | 30,600  | Yes                                  | 100                                       | Yes                      | 100                                       | 8  | 122  | 5  | 74  | 178   | 60   | 96   | 22  | 3  | 163                                 | 30.0   | -4   | 345                   | 5.9                    | 1.5                          | 3.0             | Y                                      | Y                                       | 371                             | 439  | 95                           | Yes* |
| 17   | Queanbeyan (R)                 | 17,350   | 3,940   | 61   | 871                             | 470                              | 1,341                                 | 9,890  | 24,100  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.1  | 180  | 6  | 33  | 173   | 80   | 100  | 61  | 0  | 0                                   | 30.8   | -20  | 159                   | 2.8                    | 0.4                          | 1.3             | Y                                      | Y                                       | 577                             | 377  | 95                           | Yes* |
| 18   | Dubbo                          | 17,590   | 8,590   | 74   | 848                             | 690                              | 1,538                                 | 10,900   | 30,600  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.7  | 131  | 5  | 15  | 327   | 120  | 100  | 46  | 79   | 2,183                               | 37.8   | -3   | 1,275                 | 21.1                   | 5.0                          | 3.9             | Y                                      | Y                                       | 482                             | 350  | 100                          | Yes+ |
| 19   | Orange                         | 17,520   | 7,310   | 70   | 564                             | 423                              | 987                                   | 12,100   | 34,000  | Yes                                  | 100                                       | Yes                      | 100                                       | 1  | 255  | 7  | 104   | 170   | 60   | 100  | 33  | 78   | 2,826                               | 31.6   | -12  | 1,259                 | 21.9                   | 4.0                          | 2.7             | Y                                      | Y                                       | 339                             | 409  | 100                          | Yes* |
| 20   | Goulburn Mulwaree              | 11,190   | 2,750   | 65*  | 624                             | 724                              | 1,348                                 | 7,840  | 41,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 5  | 180  | 10   | 69  | 139   | 70   | 100  | 105   | 93   | 1,806                               | 21.1   | -6   | 763                   | 8.4                    | 0.8                          | 6.2             | Y                                      | Y                                       | 426                             | 330  | 95                           | Yes  |
| 21   | Bathurst Regional              | 15,720   | 7,020   | 82   | 522                             | 479                              | 1,001                                 | 10,070   | 33,000  | Yes                                  | 100                                       | Yes                      | 100                                       | 34   | 120  | 7  | 91  | 225   | 80   | 100  | 99  | 99   | 3,712                               | 27.5   | -12  | 825                   | 13.0                   | 1.6                          | 2.7             | Y                                      | Y                                       | 545                             | 435  | 100                          | Yes+ |
| 22   | Lismore (R)                    | 14,320   | 3,180   | 70   | 666                             | 772                              | 1,438                                 | 13,200   | 35,600  | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 140  | 20   | 4   | 155   | 40   | 68   | 50  | 0  | 5                                   | 23.1   | -2   | 454                   | 5.9                    | 1.6                          | 0.5             | Y                                      | Y                                       | 493                             | 454  | 94                           | Yes+ |
| 23   | Bega Valley (UF)               | 14,360   | 3,460   | 65*  | 541                             | 1,109                            | 1,650                                 | 19,000   | 44,900  | Yes                                  | 100                                       | Yes                      | 100                                       | 13   | 95   | 6  | 16  | 137   | 50   | 92   | 9   | 20   | 446                                 | 26.6   | -3   | 619                   | 8.2                    | -0.8                         | 0.7             | Y*                                     | Y                                       | 543                             | 740  | 95                           | Yes* |
| 24   | Ballina (R)                    | 14,360   | 4,220   | 66   | 555                             | 807                              | 1,362                                 | 11,200   | 23,800  | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 120  | 5  | 3   | 181   | 160  | 79   | 3   | 10   | 517                                 | 28.4   | 17   | 579                   | 8.2                    | 1.2                          | 2.7             | Y                                      | Y                                       | 494                             | 647  | 95                           | Yes+ |
| 25   | Kempsey (GW)                   | 12,510   | 3,780   | 59   | 580                             | 791                              | 1,371                                 | 17,100   | 45,100  | Yes                                  | 100                                       | Yes                      | 100                                       | 0.2  | 215  | 7  | 2   | 156   | 100  | 74   | 33  | 3  | 77                                  | 21.8   | 8  | 594                   | 7.0                    | 1.3                          | 0.4             | Y                                      | Y                                       | 477                             | 563  | 95                           | Yes+ |
| 26   | Essential Energy               | 10,530   | 6,340   | 59   | 755                             | 511                              | 1,266                                 |  |   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  |  | 14   | 1   | 257   | 80   | 100  | 129   | 57   | 776                                 | 21.0   |  | 619                   | 6.3                    |                              | 0.0             | Y*                                     | Y*                                      | 1025                            | 332  | 100                          | Yes+ |
| 27   | Byron (R)                      | 11,220   | 3,380   | 73   | 574                             | 1,093                            | 1,667                                 | 22,300   | 26,100  | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 120  | 9  | 5   | 180   | 50   | 97   | 11  | 14   | 444                                 | 25.2   | 14   | 111                   | 1.2                    | 1.6                          | 4.0             | Y                                      | Y                                       | 482                             | 680  | 100                          | Yes* |
| 28A  | Goldenfields (R) (NO SGE)      | 10,280   | 6,180   | 78   | 750                             |                                  |                                       | 7,080  | 24,000  | Yes                                  | 100                                       | Yes                      | 100                                       | 5  | 205  | 13   | 5   | 275   | 90   |  |   |  |                                     | 14.7   | -13  |                       |                        | 3.6                          |                 | Y                                      |   | 830                             |  | 90                           | Yes* |
| 28B  | Goldenfields (BS) (NO SGE)     | 19,290   | 440   |  |                                 |                                  |                                       |  |   | Yes                                  | 100                                       | Yes                      | 100                                       |  |  | 0  |   |   |  |  |   |  |                                     | 5.5  | -15  |                       |                        | 0.0                          |                 | Y                                      |   | 150                             |  | 86                           | Yes* |
| Totals or Medians (% of LWUs basis excl NO SGE suppliers) for >10,000 Properties |                                | 613,000  | 185,160   |  | 574                             | 739                              | 1,341                                 | 12,450   | 34,450  |                                      |   |                          |   | 3  | 136  | 7  | 15  | 168   | 60   | 100  | 39  | 14   | 25,440                              | 1,049  | -2   | 513                   | 309                    | 1.6                          |                 |  |   |                                 |  |                              |      |



Table 5: 2014-15 NSW water utility performance summary

| WATER UTILITY   |                             | CHARACTERISTICS  |   | BILLS / PRICING  |                                 |                                  |                                       |  |  | HEALTH                               |   |                          |   | LEVELS OF SERVICE  |  |  |   | ENVIRONMENT   |  |  |   |                   |       | FINANCIAL  |  |                     |  |                                     |  |   |   | EFFICIENCY                             |   | BPM                             |  |
|---|-----------------------------|--|---|--|---------------------------------|----------------------------------|---------------------------------------|--|--|--------------------------------------|---|--------------------------|---|--|--|--|---|---|--|--|---|-------------------|-------|--|--|---------------------|--|-------------------------------------|--|---|---|--|---|---------------------------------|--|
|   |                             | Water Supply Connected Properties<br><br>(No.) <sup>4</sup><br><br>(1)<br>C4 | Total Urban Water Supplied<br><br>(ML) <sup>2,3</sup><br><br>(2)<br>W11 | Residential Revenue from Usage Charges<br><br>(%)<br><br>(3)<br>F4 | Typical Residential Bill        |                                  |                                       | Typical Developer Charge<br><br>(\$/ET)<br><br>(7) | Current Replacement Cost<br><br>(\$/assmnt)<br><br>(8) | Water Quality Compliance (2011 ADWG) |   |                          |   | Water Quality Complaints<br><br>WS<br><br>(per 1000 props)<br><br>(13)<br>C9 | Avge Duration of Unplanned Interruption<br>WS<br><br>(mins)<br><br>(14)<br>C15 | Water Main Breaks<br><br>WS<br><br>(per 100km of Main)<br><br>(15)<br>A8 | Total Complaints<br>WS & SGE<br><br>(No./1000 props)<br><br>(16)<br>C13 | Average Annual Residential Water Supplied<br><br>(kL/connected prop)<br><br>(17)<br>W12 | Real Water Loss<br>WS<br><br>(L / connection / d)<br><br>(18)<br>A10 | Sge Treated that was Complia nt<br><br>(%)<br><br>(19)<br>E4 | Sge Mains Breaks & Chokes<br><br>(No. per 100km of main)<br><br>(20)<br>A14 | Effluent Recycled |       | Total Revenue<br><br>WS & SGE<br><br>(\$M) <sup>3,8</sup><br><br>(23)<br>F1+F2 | Net Debt to Equity<br>WS & SGE<br><br>(%)<br><br>(24)<br>F22 | Capital Expenditure |  | Economic Real Rate of Return        |  | Full Cost Recovery                      |   | Operating Cost OMA                     |   | Best Practice Implementation    |  |
|   |                             |  |   |  | WS<br><br>(\$)<br><br>(4)<br>P3 | SGE<br><br>(\$)<br><br>(5)<br>P6 | WS & SGE<br><br>(\$)<br><br>(6)<br>P8 |  |  | Achieved?<br><br>Note 12             | % Pop'n with Compliance<br><br>(10)<br>H3 | Achieved?<br><br>Note 11 | % Pop'n with Compliance<br><br>(12)<br>H4 |  |  |  |   |   |  |  |   | (%)               | (ML)  |  |  | WS & SGE            | WS<br><br>(\$/prop)<br><br>(25)<br>F28 + F29 | SGE<br><br>(\$M)<br><br>(26)<br>F16 | WS<br><br>(\$/prop)<br><br>(27)<br>F17 | SGE<br><br>(\$/prop)<br><br>(28)<br>F18 | WS<br><br>(\$/prop)<br><br>(29)<br>(30) | WS<br><br>(\$/prop)<br><br>(31)<br>F11 | SGE<br><br>(\$/prop)<br><br>(32)<br>F12 | WS & SGE<br><br>(%)<br><br>(33) | Strategic Business Plans Completed ?<br>Note 14 (Yes/No)<br><br>(34) |
|   |                             |  |   |  |                                 |                                  |                                       |  |  |                                      |   |                          |   |  |  |  |   |   |  |  |   |                   |       |  |  |                     |  |                                     |  |   |   |  |   |                                 |  |
|   |                             |  |   |  |                                 |                                  |                                       |  |  |                                      |   |                          |   |  |  |  |   |   |  |  |   |                   |       |  |  |                     |  |                                     |  |   |   |  |   |                                 |  |
|   |                             |  |   |  |                                 |                                  |                                       |  |  |                                      |   |                          |   |  |  |  |   |   |  |  |   |                   |       |  |  |                     |  |                                     |  |   |   |  |   |                                 |  |
| 37  | Inverell                    | 5,770  | 1,810   | 45   | 564                             | 454                              | 1,018                                 | 14,800   | 30,600   | Yes                                  | 100                                       | Yes                      | 100                                       | 0.3  | 60   | 2  | 12  | 180   | 50   | 99   | 32  | 0                 | 0     | 6.9  | -6   | 97                  | 0.5  | 0.8                                 | 0.8                                    | Y                                       | Y                                       | 524                                    | 305                                     | 63                              | Yes*   |
| 38  | Moree Plains (GW)           | 4,600  | 3,340   | 75*  | 1,045                           | 630                              | 1,675                                 | 8,700  | 31,000   | Yes                                  | 100                                       | Yes                      | 100                                       | 3  | 60   | 49   | 113   | 548   | 160  | 100  | 46  | 58                | 793   | 9.8  | 3  | 517                 | 2.1  | 4.1                                 | 4.1                                    | Y                                       | Y                                       | 598                                    | 444                                     | 100                             | Yes*   |
| 39  | Cowra                       | 5,320  | 3,010   | 79   | 875                             | 781                              | 1,656                                 | 12,700   | 35,500   | Yes                                  | 100                                       | Yes                      | 100                                       | 12   | 180  | 15   | 56  | 268   | 110  | 50   | 157   | 0                 | 0     | 10.1   | 6  | 551                 | 2.5  | 2.0                                 | 3.1                                    | Y                                       | Y                                       | 746                                    | 441                                     | 100                             | Yes*   |
| 40  | Central Tablelands (NO SGE) | 5,490  | 1,710   | 69*  | 620                             |                                  |                                       | 8,560  | 20,900   | Yes                                  | 100                                       | Yes                      | 100                                       | 5  | 120  | 8  | 19  | 187   | 60   |  |   |                   |       | 5.2  | -6   | 154                 | 0.8  | 0.1                                 |  | Y                                       |   | 626                                    |   | 90                              | Yes  |
| 41  | Muswellbrook                | 5,810  | 2,990   | 69*  | 547                             | 581                              | 1,128                                 | 13,380   | 28,100   | Yes                                  | 100                                       | Yes                      | 100                                       | 18   | 270  | 38   | 25  | 245   | 60   | 47   | 5   | 93                | 892   | 9.0  | -21  | 673                 | 3.9  | -0.5                                | 1.4                                    | Y                                       | Y                                       | 626                                    | 375                                     | 95                              | Yes+   |
| 42  | Corowa                      | 5,450  | 3,120   | 82   | 560                             | 668                              | 1,228                                 | 2,910  | 18,800   | Yes                                  | 100                                       | Yes                      | 100                                       | 3  | 120  | 12   | 18  | 287   | 120  | 100  | 23  | 21                | 184   | 9.4  | -11  | 477                 | 2.5  | 3.6                                 | 3.6                                    | Y                                       | Y                                       | 469                                    | 424                                     | 89                              | Yes+   |
| 43  | Tumut                       | 4,500  | 1,570   | 78*  | 503                             | 635                              | 1,138                                 | 10,800   | 24,500   | Yes                                  | 99  | Yes                      | 100                                       | 3  | 120  | 3  | 30  | 220   | 70   | 97   | 51  | 11                | 101   | 7.0  | -1   | 243                 | 1.0  | 0.4                                 | -0.2                                   | Y                                       | Y                                       | 467                                    | 630                                     | 100                             | Yes  |
| 44  | Gunnedah (GW)               | 4,350  | 3,100   | 74*  | 628                             | 492                              | 1,120                                 | 15,500   | 29,100   | Yes                                  | 99  | Yes                      | 99  | 1  | 150  | 8  | 47  | 427   | 80   | 100  | 20  | 96                | 603   | 7.7  | -22  | 655                 | 2.7  | 3.3                                 | 4.9                                    | Y                                       | Y                                       | 475                                    | 284                                     | 100                             | Yes  |
| 45  | Upper Hunter                | 4,400  | 2,700   | 73*  | 798                             | 477                              | 1,275                                 | 8,460  | 29,900   | Yes                                  | 100                                       | Yes                      | 100                                       | 1  | 60   | 30   | 40  | 306   | 240  | 100  | 10  | 14                | 126   | 9.3  | -12  | 925                 | 4.0  | 5.1                                 | 0.2                                    | Y                                       | Y                                       | 659                                    | 453                                     | 100                             | Yes  |
| 46  | Narrabri (GW)               | 4,390  | 2,610   | 56   | 591                             | 677                              | 1,268                                 | 8,670  | 35,100   | Yes                                  | 100                                       | Yes                      | 100                                       | 11   | 120  | 35   | 47  | 308   | 200  | 71   | 57  | 55                | 432   | 6.8  | -24  | 407                 | 1.7  | 2.6                                 | 0.0                                    | Y                                       | Y                                       | 480                                    | 432                                     | 79                              | Yes*   |
| 47  | Bellingen (UF)              | 4,090  | 1,140   | 77   | 343                             | 842                              | 1,185                                 | 11,000   | 32,300   | Yes                                  | 100                                       | Yes                      | 100                                       | 2.4  | 120  | 7  | 31  | 152   | 70   | 100  | 22  | 0                 | 0     | 5.4  | -18  | 1,838               | 5.7  | -0.3                                | 0.3                                    | Y                                       | Y                                       | 391                                    | 662                                     | 100                             | Yes  |
| 48  | Leeton                      | 4,080  | 2,700   | 66   | 675                             | 492                              | 1,167                                 | 9,700  | 32,100   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 120  | 10   | 2   | 431   | 150  | 100  | 19  | 0                 | 0     | 5.8  | -19  | 718                 | 2.6  | 0.4                                 | -0.6                                   | Y                                       | Y                                       | 590                                    | 466                                     | 95                              | Yes*   |
| 49  | Young (R)                   | 4,880  | 1,420   | 69   | 659                             | 720                              | 1,379                                 | 2,450  | 25,700   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 120  | 31   | 14  | 166   | 60   | 83   | 80  | 33                | 180   | 6.7  | 3  | 215                 | 0.9  | -0.7                                | 2.7                                    | Y*                                      | Y                                       | 254                                    | 330                                     | 89                              | Yes  |
| 50  | Cooma-Monaro                | 3,670  | 1,530   | 64*  | 872                             | 820                              | 1,692                                 | 14,000   | 37,300   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 180  | 7  | 59  | 339   | 60   | 100  | 35  | 1                 | 5     | 6.5  | -10  | 690                 | 2.5  | 0.8                                 | 2.0                                    | Y                                       | Y                                       | 540                                    | 532                                     | 100                             | Yes  |
| 51  | Forbes                      | 3,720  | 2,350   | 66   | 523                             | 644                              | 1,167                                 | 10,700   | 33,800   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 120  | 20   | 84  | 352   | 90   | 100  | 70  | 1                 | 9     | 5.3  | -16  | 265                 | 0.9  | -1.6                                | 0.9                                    | Y*                                      | Y                                       | 671                                    | 465                                     | 100                             | Yes*   |
| 52  | Snowy River (UF)            | 5,310  | 650   | 41   | 534                             | 900                              | 1,434                                 | 11,660   | 32,400   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 120  | 22   | 41  | 83  | 70   | 81   | 33  | 8                 | 39    | 6.9  | -8   | 387                 | 2.0  | 1.0                                 | 2.6                                    | Y                                       | Y                                       | 311                                    | 359                                     | 95                              | Yes  |
| 53  | Berrigan (DS)               | 3,540  | 2,550   | 40   | 775                             | 477                              | 1,252                                 | 7,450  | 22,600   | Yes                                  | 100                                       | Yes                      | 100                                       | 7  | 60   | 17   | 82  | 399   | 100  | 100  | 84  | 79                | 590   | 4.9  | -19  | 54                  | 0.2  | 3.2                                 | 0.4                                    | Y                                       | Y                                       | 467                                    | 312                                     | 63                              | Yes*   |
| 54  | Deniliquin                  | 3,500  | 1,880   | 55*  | 699                             | 770                              | 1,469                                 | 8,600  | 29,600   | Yes                                  | 100                                       | Yes                      | 100                                       | 0.6  | 90   | 69   | 19  | 474   | 110  | 100  | 28  | 11                | 54    | 5.3  | -8   | 180                 | 0.6  | 0.4                                 | 2.1                                    | Y                                       | Y                                       | 528                                    | 429                                     | 100                             | Yes  |
| 55  | Warrumbungle                | 3,310  | 1,010   | 51*  | 715                             | 458                              | 1,173                                 | 2,860  | 32,500   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 142  | 13   | 100   | 201   | 210  | 83   | 128   | 17                | 59    | 3.9  | -8   | 179                 | 0.6  | -1.2                                | -1.0                                   | Y*                                      | Y*                                      | 673                                    | 432                                     | 79                              | Yes  |
| 56  | Yass Valley                 | 3,250  | 840   | 53   | 902                             | 595                              | 1,497                                 | 18,300   | 32,900   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 240  | 8  | 58  | 161   | 90   | 100  | 29  | 0                 | 0     | 5.9  | 18   | 0                   |  | 3.8                                 | 2.9                                    | Y                                       | Y                                       | 439                                    | 433                                     | 100                             | Yes+   |
| Totals or Medians (% of LWUs basis) for 3,001 - 10,000 Properties |                             | 149,000  | 68,990  |  | 638                             | 635                              | 1,252                                 | 10,520   | 31,000   |                                      |   |                          |   | 2  | 120  | 14   | 47  | 248   | 85   | 99   | 41  | 11                | 5,808 | 238  | -8   | 387                 | 75   | 0.9                                 | 2.0                                    | 28                                      | 27                                      | 531                                    | 432                                     | 98                              |  |
| LWUs with 1,501 - 3,000 Properties                                |                             |  |   |  |                                 |                                  |                                       |  |  |                                      |   |                          |   |  |  |  |   |   |  |  |   |                   |       |  |  |                     |  |                                     |  |   |   |  |   |                                 |  |
| 57  | Wellington                  | 2,910  | 1,300   | 66   | 785                             | 587                              | 1,372                                 | 6,250  | 25,900   | Yes                                  | 91  | Yes                      | 100                                       | 0  | 120  | 5  | 43  | 213   | 90   | 100  | 31  | 0                 | 0     | 5.2  | 6  | 128                 | 0.3  | 5.7                                 | 1.5                                    | Y                                       | Y                                       | 522                                    | 405                                     | 100                             | Yes*   |
| 58  | Cootamundra (R)             | 3,010  | 910   | 53*  | 662                             | 388                              | 1,050                                 | 10,730   | 18,100   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 90   | 91   | 137   | 190   | 70   | 100  | 210   | 98                | 486   | 3.7  | -16  | 70                  | 0.2  | -1.6                                | 1.4                                    | Y*                                      | Y                                       | 287                                    | 229                                     | 84                              | Yes*   |
| 59  | Lachlan                     | 2,840  | 2,030   | 78   | 1,427                           | 458                              | 1,885                                 | 13,600   | 54,300   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  |  |  |   | 531   | 140  | 0  | -   | 24                | 116   | 4.5  | -14  | 950                 | 2.7  | -1.0                                | -2.6                                   | Y*                                      | Y*                                      | 798                                    | 452                                     | 100                             | Yes*   |
| 60  | Glen Innes Severn           | 3,050  | 510   | 52   | 539                             | 450                              | 989                                   | 5,720  | 18,200   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 180  | 2  | 18  | 131   | 30   | 100  | 47  | 0                 | 0     | 3.3  | 6  | 668                 | 2.0  | 1.2                                 | 1.8                                    | Y                                       | Y                                       | 390                                    | 287                                     | 100                             | Yes*   |
| 61  | Liverpool Plains            | 2,760  | 870   | 41   | 812                             | 504                              | 1,316                                 | 13,600   | 33,900   | Yes                                  | 100                                       | Yes                      | 100                                       | 2  | 35   | 23   | 139   | 190   | 100  | 56   | 26  | 0                 | 0     | 3.8  | -8   | 326                 | 0.9  | 0.5                                 | 1.2                                    | Y                                       | Y                                       | 587                                    | 320                                     | 84                              |  |
| 62  | Narromine (GW)              | 2,120  | 1,290   | 74   | 690                             | 548                              | 1,238                                 | 8,170  | 21,600   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 60   | 19   | 6   | 452   | 160  | 100  | 24  | 0                 | 0     | 2.8  | -29  | 488                 | 1.0  | 2.8                                 | -0.2                                   | Y                                       | Y                                       | 603                                    | 474                                     | 100                             | Yes  |
| 63  | Narrandera (GW)             | 2,090  | 2,180   | 72   | 957                             | 505                              | 1,462                                 | 2,400  | 20,800   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 120  | 23   | 98  | 678   | 180  | -  | 183   | 1                 | 3     | 2.8  | -27  | 523                 | 1.0  | 3.9                                 | 1.2                                    | Y                                       | Y                                       | 555                                    | 435                                     | 73                              | Yes*   |
| 65  | Murray (DS)                 | 3,050  | 1,280   | 51   | 590                             | 389                              | 979                                   | 4,000  | 15,200   | Yes                                  | 100                                       | Yes                      | 100                                       | 0  | 90   | 8  | 4   | 280   | 90   | 100  | 16  | 16                | 90    | 4.4  | -13  | 228                 | 0.7  | 4.6                                 | 1.9                                    | Y                                       | Y                                       | 476                                    | 333                                     | 100                             | Yes*   |
| 67  | Cobar                       | 2,260  | 950   | 77   | 935                             | 320                              | 1,255                                 | 2,080  | 20,700   | Yes                                  | 100                                       | Yes                      | 100                                       | 10   |  |  | 28  | 342   | 70   | 100  | 4   | 0                 | 0     | 5.0  | -15  | 0                   |  | 14.7                                | -1.5                                   | Y                                       | Y*                                      |  |   |                                 |  |



Table 5: 2014-15 NSW water utility performance summary

| WATER UTILITY |  | CHARACTERISTICS  |   | BILLS / PRICING  |                          |     |          |  |   | HEALTH                               |                         |                          |                         | LEVELS OF SERVICE  |  |  |   | ENVIRONMENT   |  |  |   |                   |          | FINANCIAL  |  |                     |     |                              |     |                    |     | EFFICIENCY         |     | BPM                          |     |    |     |          |   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |      |
|---------------|--|--|---|--|--------------------------|-----|----------|--|---|--------------------------------------|-------------------------|--------------------------|-------------------------|--|--|--|---|---|--|--|---|-------------------|----------|--|--|---------------------|-----|------------------------------|-----|--------------------|-----|--------------------|-----|------------------------------|-----|----|-----|----------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|
|               |  | Water Supply Connected Properties<br><br>(No.) <sup>4</sup><br><br>(1)<br>C4 | Total Urban Water Supplied<br><br>(ML) <sup>2,3</sup><br><br>(2)<br>W11 | Residential Revenue from Usage Charges<br><br>(%)<br><br>(3)<br>F4 | Typical Residential Bill |     |          | Typical Developer Charge<br><br>WS & SGE<br><br>(\$/ET)<br><br>(7) | Current Replacem ent Cost<br><br>WS & SGE<br><br>(\$/assmnt)<br><br>(8) | Water Quality Compliance (2011 ADWG) |                         |                          |                         | Water Quality Complaints<br><br>WS<br><br>(per 1000 props)<br><br>(13)<br>C9 | Avge Duration of Unplanned Interruption<br>WS<br><br>(mins)<br><br>(14)<br>C15 | Water Main Breaks<br><br>WS<br><br>(per 100km of Main)<br><br>(15)<br>A8 | Total Complaints<br>WS & SGE<br><br>(No./1000 props)<br><br>(16)<br>C13 | Average Annual Residential Water Supplied<br><br>(kL/connected prop)<br><br>(17)<br>W12 | Real Water Loss<br><br>WS<br><br>(L / connection / d)<br><br>(18)<br>A10 | Sge Treated that was Complia nt<br><br>(%)<br><br>(19)<br>E4 | Sge Mains Breaks & Chokes<br><br>(No. per 100km of main)<br><br>(20)<br>A14 | Effluent Recycled |          | Total Revenue<br>WS & SGE<br><br>(\$M) <sup>3,8</sup><br><br>(23)<br>F1+F2 | Net Debt to Equity<br>WS & SGE<br><br>(%)<br><br>(24)<br>F22 | Capital Expenditure |     | Economic Real Rate of Return |     | Full Cost Recovery |     | Operating Cost OMA |     | Best Practice Implementation |     |    |     |          |   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |      |
|               |  |  |   |  | WS                       | SGE | WS & SGE |  |   | E.coli Compliance                    |                         | Chemical Compliance      |                         |  |  |  |   |   |  |  |   | WS & SGE          |          |  |  | WS                  | SGE | WS                           | SGE | WS                 | SGE | WS                 | SGE | WS                           | SGE | WS | SGE | WS & SGE | Strategic Business Plans Completed ?<br>Note 14 (Yes/No)<br><br>(%)<br>(34) |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |      |
|               |  |  |   |  |                          |     |          |  |   | Achieved?<br><br>Note 12             | % Pop'n with Compliance | Achieved?<br><br>Note 11 | % Pop'n with Compliance |  |  |  |   |   |  |  |   | WS & SGE          | WS & SGE |  |  |                     |     |                              |     |                    |     |                    |     |                              |     |    |     |          |   | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & SGE | WS & |



Notes

1. This table shows the key 2014-15 performance indicators for NSW water utilities. More detailed indicators are shown in Tables 6 to 18 and Figures 1 to 68.

2. **No WS** = not responsible for water supply; **No SGE** = not responsible for sewerage;  
**BS** = bulk supplier; **DS** = dual supply; **GW** = groundwater; **UF** = unfiltered; **R** = reticulator.  
For LWUs with No WS or No SGE, results are shown left justified and are not included in the median calculation for water supply and sewerage. NWI indicator numbers are shown in bold below the column number (eg. column (1), NWI indicator **C4**).

3. Where an LWU has not reported an item for 2014-15, the value previously reported has been used where available.  
Such values are shown in this table in *italics bold* .

4. The number of connected properties shown in column (1) for LWUs with "No WS" is the number of sewerage connected properties.

5. **NSW Water Utilities**  
In NSW there are 109 water utilities comprising:
  - 4 metropolitan water utilities (Sydney and Hunter Water Corporations, Water NSW (from 1 January 2015, formerly Sydney Catchment Authority (SCA)) and Hawkesbury Council), and
  - 105 regional Local Water Utilities (LWUs).The 105 LWUs comprise:
  - 100 local government councils (under *Local Government Act 1993*),
  - 5 LWUs (Gosford Council, Wyong Water, Cobar WB, Fish River WS, Essential Energy) under the *Water Management Act 2000* .Of the 105 LWUs,
  - 96 were responsible for water supply (including 3 for bulk supply - Cobar WB, Fish River WS & Rous Water)
  - 99 were responsible for sewerage.
  - 90 were responsible for both water supply and sewerage, 6 for water supply only and 9 for sewerage only.

6. **Totals for Regional NSW**  
The totals shown below are for regional NSW and therefore exclude Sydney and Hunter Water Corporations, Water NSW and Hawkesbury Council. The totals exclude double-counting where bulk water suppliers are involved.
  - Number of water supply connected properties** in regional NSW was 828,000 (col (1)).
  - Total annual urban water supplied** was 291,000 ML (column (2)).
  - Total revenue** for water supply and sewerage was \$1,420M (column (23)).
  - Total current replacement cost (CRC)** of WS and SGE assets was \$28,400M, with a median of \$32,900 per assessment (column (8)).

7. **Statewide medians (regional LWUs):**
  - Residential revenue from water usage charges** - Median is 72% (column (3)), which has increased from 20% to 72% over the past 20 years due to LWU tariff reform and strong pricing signals to encourage efficient water use (figure 12 on page 111).
  - Typical residential bill (TRB)** for water and sewerage - \$1235/assessment for 2014-15 (column (6)).  
The water supply TRB was \$566 (column (4)) and the sewerage TRB was \$669 (column (5)).
  - Typical developer charge** for water and sewerage - \$10,600/ET for 2014-15 (column (7) and Tables 6 and 7).
  - Water quality complaints** - 3 per 1000 properties (column (13)).
  - Average duration of unplanned interruptions** for water supply - 133 minutes (column (14)).
  - Water main breaks** - 9 breaks per 100km of main (column (15)).
  - Total water supply and sewerage complaints** - 19 per 1000 properties (column (16)).
  - Average annual residential water supplied** - 166kL/connected property (col (17)). This has decreased by 50% since 1991 (page 111).
  - Real water loss** - 60 L/connection/d (column (18)).
  - Median sewage volume that was compliant** - 100% (column (19)).
  - Median sewerage main breaks and chokes** - 35 per 100km of main (column (20)).

8. **Statewide medians (financial):**
  - Economic real rate of return (ERRR)** for water supply and sewerage was 1.4% (page 12).  
The water supply ERRR was 1.6% and the sewerage ERRR was 1.7% (columns (27) and (28)).  
100% of LWUs are achieving full cost recovery for water supply and 98% are achieving full cost recovery for sewerage (columns (29) & (30)).  
The remaining 2 sewerage utilities which are not achieving full cost recovery need to do so. Refer also to Tables 6 and 7 and page 29.
  - Net debt/equity** for water and sewerage was -1% (column (24)).

8. **Statewide medians (financial)** continued from left:
  - Operation, maintenance & administration cost (OMA)** for water supply was \$400 and sewerage was \$420 (cols (31) & (32)).  
OMA includes part of the OMA cost of the bulk water supplier but excludes the purchase cost of water. However, NWI indicator F11 includes the purchase cost of water and therefore may differ from column (31). Refer to page 101 of Appendix G.
  - Management cost** for water supply and sewerage - \$301/connected property.  
Water supply management cost was \$141 and sewerage management cost was \$160 per connected property.
  - Capital expenditure** for water supply and sewerage - \$359/property (column (25)).  
The total capital expenditure for water supply and sewerage was \$416M (column (26)).

9. **Category 1 Businesses** - 67 LWUs are Category 1 businesses (ie. with an annual revenue of over \$2M) as defined in the *NSW Government's Policy Statement on Application of National Competition Policy to Local Government, June 1996* .  
66 such LWUs are responsible for water supply and 52 such LWUs are responsible for sewerage.

10. **Pay-for-use water supply tariff** - All of the 93 LWUs providing a reticulated water supply have a pay-for-use water supply tariff (Table 6) (ie. a two-part tariff or an inclining block tariff). Such tariffs comply with IPART recommendations and the *COAG Strategic Framework for Water Reform* .

11. **Physical and chemical water quality** - 98.3% of the 4,600 physical samples and 99.9% of the 4,800 chemical samples tested for NSW LWUs achieved 100% compliance with the *2011 Australian Drinking Water Guidelines (ADWG)* .  
All LWUs complied with chemical quality (health related) and are shown as 'Yes' in column (11) (pages 7, 8, 38, 39 and 101).  
All LWUs complied with physical quality (page 8). The results shown for H4 in column 12 are based on population.

12. **Microbiological water quality** - E.coli contamination is the primary health-related indicator.
  - E.coli** - 99.9% of the 19,400 samples tested for NSW LWUs achieved 100% compliance with the *2011 ADWG*.  
All LWUs complied with these guidelines and are shown as 'Yes' in column (9).  
The public drinking water supply for 99.9% of the urban population in regional NSW complied with both the microbiological and chemical requirements of the *2011 ADWG* (columns (10) and (12)).

13. **Compliance with EPA Discharge Licence for Sewerage**
  - BOD** - 96% of the 4,184 sampling days for NSW LWUs achieved 100% compliance with the 90-percentile limit of their EPA licence for BOD (Biochemical Oxygen Demand). 89% of LWUs complied with the EPA licence for BOD.
  - SS** - 92% of the 4,184 sampling days for NSW LWUs achieved 100% compliance with the 90-percentile limit of their EPA licence for SS (Suspended Solids). 82% of LWUs complied with their EPA licence for SS.  
18 LWUs had no EPA discharge licence limit.

14. **Best-Practice implementation** - overall the LWUs have implemented 90% of the outcomes required by the NSW Best-Practice Management Framework (column (33)).

15. **Strategic Business Plans** (page 4) - 99 LWUs (94%) have completed a sound 30-year water and/or sewerage Strategic Business Plan, which includes a 30-year total asset management plan and a 30-year financial plan (column (34)). These LWUs have demonstrated the long term financial sustainability of their water supply and sewerage businesses to comply with National Competition Policy. These plans cover over 99% of the connected properties in regional NSW. As the plans of 51 of these utilities are now over 4 years old (shown as "Yes\*" in column (34)), these utilities now need to prepare a 30-year IWCM Strategy, financial plan and report in accordance with the July 2014 IWCM Check List (www.water.nsw.gov.au). Similarly, the 17 LWUs whose IWCM Strategy is over 6 years old [shown as Yes<sup>+</sup>] need to prepare such a new IWCM Strategy, financial plan and report [column (34)].

16. **Total Urban Water Supplied** of 291,000 ML(column (2)) comprises 260,000 ML potable water, 20,000 ML non-potable water and 11,600 ML recycled water. Similarly, the average annual residential water supplied (column (3)) includes non-potable & recycled water

17. **Reuse of recycled water** comprised 39,000 ML which is 22% of the volume of sewage collected and was carried out by 70% of utilities, mostly for agriculture (columns (21) and (22)). Refer also to figures 26a and 27 on page 114.

18. **National Water Initiative (NWI) Indicators** - The 32 NSW water utilities with over 10,000 connected properties (3 metropolitan utilities and 29 regional utilities) are required to report their performance under the NWI. The results that have met the rigorous NWI auditing requirements have been published in the *National Performance Report 2014-15*. Refer also to Notes 14 and 15 on page 35.

19. The performance indicators for Sydney and Hunter Water Corporations and Water NSW were obtained from the *National Performance Report 2014-15 for Urban Water Utilities* (www.bom.gov.au).
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Table 5A: Water supply and sewerage indicators - financial

| WATER UTILITY                       |                          | FINANCIAL                 |       |       |                           |       |       |                   |       |       |   |                        |       |                  |       |       |                                 |       |       |                    |       |                              |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |
|-------------------------------------|--------------------------|---------------------------|-------|-------|---------------------------|-------|-------|-------------------|-------|-------|---|------------------------|-------|------------------|-------|-------|---------------------------------|-------|-------|--------------------|-------|------------------------------|----------------|---------|---------|----------------------|-------|-------|--------------------------|---------|----------------------|-------|-------|------------------------|---------|------------------------------|---------|-----------------|-------|
|                                     |                          | Operating Cost (OMA)      |       |       | Income per Property       |       |       | Total Income      |       |       | Capital Expenditure<br>(Assets, Renewals,<br>Plant/Equip) |                        |       | Return on Assets |       |       | Economic Real Rate<br>of Return |       |       | Net Debt to Equity |       |                              | Interest Cover |         |         | Dividend Payable     |       |       | Dividend<br>Payout Ratio |         | CSOs                 |       |       | % Revenue<br>from CSOs |         | Net Profit after Tax<br>NPAT |         | NPAT Ratio      |       |
|                                     |                          | WS & SGE<br>(\$/property) |       |       | (\$/property)<br>WS & Sge |       |       | WS & Sge<br>(\$M) |       |       | WS & Sge<br>(\$ per prop)                                 |                        |       | WS & Sge<br>(%)  |       |       | WS & Sge<br>(%)                 |       |       | WS & Sge<br>(%)    |       |                              | WS & Sge       |         |         | WS & Sge<br>(\$'000) |       |       | WS & Sge<br>(%)          |         | WS & Sge<br>(\$'000) |       |       | WS & Sge<br>(%)        |         | WS & Sge<br>(\$'000)         |         | WS & Sge<br>(%) |       |
|                                     |                          | (23)<br>F13               |       |       | (24)<br>F7                |       |       | (24a)<br>F3       |       |       | (24b)<br>F28 + F29  |                        |       | (24c)            |       |       | (25)<br>F19                     |       |       | (26)<br>F22        |       |                              | (27)<br>F23    |         |         | (28)<br>F20          |       |       | (29)<br>F21              |         | (30)<br>F25          |       |       | (31)<br>F8             |         | (32)<br>F24                  |         | (32a)<br>F30    |       |
|                                     |                          | 12/13                     | 13/14 | 14/15 | 12/13                     | 13/14 | 14/15 | 12/13             | 13/14 | 14/15 | 12/13   | 13/14                  | 14/15 | 12/13            | 13/14 | 14/15 | 12/13                           | 13/14 | 14/15 | 12/13              | 13/14 | 14/15                        | 12/13          | 13/14   | 14/15   | 12/13                | 13/14 | 14/15 | 13/14                    | 14/15   | 12/13                | 13/14 | 14/15 | 13/14                  | 14/15   | 13/14                        | 14/15   | 13/14           | 14/15 |
|                                     | Sydney Water Corporation | 687                       | 676   | 664   | 1,400                     | 1,410 | 1,427 | 2,580             | 2,610 | 2,680 | 384   | 328                    | 341   |                  | 1.5   | 1.6   | 1.7                             | 100   | 96    | 98                 | 2     | 2                            | 2              | 303,703 | 256,284 | 664,024              | 54    | 129   | 162,463                  | 160,559 | 163,091              | 6     | 6     | 472,389                | 513,497 | 18                           | 19      |                 |       |
|                                     | Hunter Water Corporation | 618                       | 579   | 623   | 1,310                     | 1,304 | 1,308 | 305               | 308   | 312   | 407   | 477                    | 333   |                  | 2.5   | 2.4   | 2.0                             | 75    | 78    | 81                 | 1     | 2                            | 2              | 16,302  | 36,917  | 21,330               | 72    | 53    | 14,250                   | 14,043  | 14,285               | 5     | 5     | 51,183                 | 39,880  | 17                           | 13      |                 |       |
|                                     | Water NSW                |                           |       |       |                           |       |       |                   |       |       |   |                        |       |                  |       |       |                                 |       |       |                    |       |                              |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |
| LWUs with > 10,000 Properties       |                          |                           |       |       |                           |       |       |                   |       |       |   |                        |       |                  |       |       |                                 |       |       |                    |       |                              |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |
| 1                                   | Gosford                  | 805                       | 771   | 710   | 1212                      | 1257  | 1332  | 86                | 89.8  | 95.7  | 657   | 577                    | 513   | -0.3             | -0.1  | 0.2   | -0.1                            | 0.1   | 0.6   | 5                  | 6.2   | 6.0                          | 0              | 1       | 2       |                      |       |       |                          |         | 1209                 | 1,230 | 1,242 | 1.4                    | 1.3     | -2,032                       | 4,865   | -2              | 5     |
| 2                                   | Wyang                    | 665                       | 673   | 655   | 1239                      | 1300  | 1370  | 75                | 79.9  | 87.0  | 427   | 431                    | 435   | -0.2             | -0.1  | 0.3   | 0.5                             | 0.6   | 1.0   | 10                 | 9.5   | 9.2                          | 1              | 1       | 1       |                      |       |       |                          |         | 1385                 | 1,375 | 1,374 | 1.7                    | 1.6     | -5,219                       | 1,174   | -7              | 1     |
| 3                                   | Shoalhaven               | 746                       | 752   | 776   | 1344                      | 1356  | 1497  | 63                | 63.7  | 70.6  | 497   | 538                    | 513   | 1.6              | 1.6   | 2.9   | 1.6                             | 1.6   | 2.9   | 1                  | -0.3  | -1.0                         | >100           | 59      | >100    | 2599                 | 2,673 | 2,709 | 20                       | 13      | 1022                 | 1,035 | 1,053 | 1.6                    | 1.5     | 12,650                       | 20,773  | 20              | 29    |
| 5                                   | MidCoast                 | 922                       | 902   | 1020  | 1716                      | 1647  | 1772  | 66                | 63.5  | 68.6  | 583   | 302                    | 185   | -0.1             | 0.3   | 0.2   | 1.4                             | 1.7   | 1.7   | 25                 | 23.4  | 21.7                         | 1              | 1       | 1       |                      |       |       |                          |         | 967                  | 907   | 931   | 1.4                    | 1.4     | -5,351                       | -2,760  | -8              | -4    |
| 6                                   | Tweed                    | 888                       | 929   | 943   | 1528                      | 2096  | 1862  | 48                | 66.7  | 60.0  | 434   | 418                    | 225   | 0.2              | 1.6   | 1.0   | 0.6                             | 2.0   | 1.4   | 3                  | 2.3   | 0.1                          | 2              | 5       | 3       |                      |       |       |                          |         | 733                  | 739   | 745   | 1.1                    | 1.2     | 14,196                       | 6,521   | 21              | 11    |
| 7                                   | Port Macquarie-Hastings  | 828                       | 880   | 878   | 1453                      | 2001  | 1683  | 43                | 60.2  | 51.2  | 478   | 316                    | 540   | 0.2              | 2.1   | 1.5   | -0.1                            | 2.2   | 1.3   | -4                 | -5.3  | -7.8                         | 0              | 23      | >100    | 940                  | 860   | 17    |                          |         | 713                  | 719   | 729   | 1.2                    | 1.4     | 8,590                        | 5,070   | 14              | 10    |
| 10                                  | Coffs Harbour            | 972                       | 1006  | 1014  | 1849                      | 1894  | 1994  | 46                | 47.2  | 50.0  | 355   | 434                    | 586   | 0.0              | -0.3  | -0.3  | 0.8                             | 0.8   | 0.8   | 15                 | 13.7  | 12.8                         | 1              | 1       | 1       |                      |       |       |                          |         | 495                  | 499   | 505   | 1.1                    | 1.0     | -3,197                       | -3,274  | -7              | -7    |
| 11                                  | Albury City              | 765                       | 735   | 670   | 1374                      | 1562  | 1393  | 32                | 36.8  | 35.8  | 256   | 254                    | 166   | 1.4              | 2.8   | 3.0   | 1.5                             | 2.9   | 2.9   | 1                  | -2.4  | -6.0                         | 13             | 54      | >100    |                      |       |       |                          |         | 318                  | 316   | 323   | 0.9                    | 0.9     | 10,684                       | 9,875   | 29              | 28    |
| 13                                  | Tamworth Regional        | 946                       | 1007  | 942   | 1715                      | 2011  | 1881  | 36                | 43.1  | 40.8  | 608   | 1012                   | 428   | 1.4              | 2.5   | 2.3   | 1.7                             | 2.9   | 2.6   | -2                 | -2.2  | -4.1                         | 5              | 8       | 10      |                      |       |       |                          |         | 386                  | 384   | 403   | 0.9                    | 1.0     | 11,637                       | 6,561   | 27              | 16    |
| 14                                  | Clarence Valley          | 904                       | 876   | 851   | 1318                      | 1444  | 1515  | 28                | 30.9  | 32.5  | 750   | 694                    | 1693  | -0.4             | 0.4   | 0.3   | 0.4                             | 1.3   | 1.2   | 10                 | 9.8   | 11.3                         | 0              | 1       | 1       |                      |       |       |                          |         | 445                  | 448   | 446   | 1.4                    | 1.4     | 1,706                        | 900     | 6               | 3     |
| 15                                  | Eurobodalla              | 914                       | 987   | 906   | 1430                      | 1731  | 1779  | 28                | 33.9  | 34.8  | 358   | 364                    | 349   | 0.1              | 0.4   | 1.2   | 0.3                             | 0.7   | 1.3   | 2                  | 1.1   | -0.9                         | 1              | 3       | 8       | 529                  | 133   | 530   | -23                      | 12      | 386                  | 391   | 390   | 1.2                    | 1.1     | 1,674                        | 4,352   | 5               | 12    |
| 16                                  | Wingecarribee            | 773                       | 906   | 810   | 1354                      | 1494  | 1512  | 25                | 28.3  | 29.0  | 902   | 306                    | 345   | 0.9              | 1.2   | 2.1   | 1.1                             | 1.4   | 2.3   | 0                  | -1.3  | -3.8                         | 5              | 8       | 15      |                      |       |       |                          |         | 331                  | 339   | 357   | 1.2                    | 1.2     | 4,626                        | 6,966   | 16              | 24    |
| 17                                  | Queanbeyan               | 870                       | 961   | 954   | 1342                      | 1920  | 1776  | 22                | 31.5  | 30.8  | 54  | 427                    | 159   | -0.9             | 2.5   | 1.7   | -1.6                            | 1.8   | 0.9   | -17                | -18.7 | -20.2                        | 0              | >100    | >100    |                      |       |       |                          |         | 150                  | 159   | 162   | 0.5                    | 0.5     | 4,718                        | 2,294   | 15              | 7     |
| 18                                  | Dubbo                    | 817                       | 854   | 832   | 1715                      | 1755  | 2139  | 29                | 30.1  | 37.6  | 446   | 272                    | 1275  | 2.2              | 3.0   | 4.4   | 2.4                             | 3.0   | 4.4   | 0                  | -4.0  | -3.4                         | 13             | >100    | >100    |                      |       |       |                          |         | 188                  | 190   | 188   | 0.6                    | 0.5     | 7,340                        | 14,665  | 24              | 39    |
| 19                                  | Orange                   | 691                       | 756   | 748   | 1524                      | 1597  | 1811  | 26                | 27.4  | 31.7  | 440   | 1638                   | 1259  | 3.3              | 3.1   | 4.1   | 2.6                             | 2.4   | 3.5   | -13                | -14.4 | -12.1                        | >100           | >100    | >100    |                      |       |       |                          |         | 253                  | 257   | 259   | 0.9                    | 0.8     | 9,307                        | 13,597  | 34              | 43    |
| 20                                  | Goulburn Mulwaree        | 806                       | 786   | 756   | 2035                      | 2032  | 1889  | 20                | 21.1  | 21.1  | 438   | 368                    | 763   | 2.1              | 2.1   | 2.1   | 2.4                             | 2.4   | 2.3   | -2                 | -4.6  | -5.5                         | 8              | 10      | 10      |                      |       |       |                          |         | 186                  | 182   | 47    | 0.9                    | 0.2     | 5,972                        | 5,794   | 28              | 27    |
| 21                                  | Bathurst Regional        | 933                       | 948   | 980   | 1444                      | 1644  | 1744  | 22                | 25.6  | 27.4  | 439   | 427                    | 825   | 1.1              | 2.1   | 2.2   | 0.9                             | 1.8   | 2.0   | -11                | -12.1 | -11.6                        | >100           | >100    | >100    |                      |       |       |                          |         | 202                  | 206   | 216   | 0.8                    | 0.8     | 4,718                        | 4,858   | 18              | 18    |
| 22                                  | Lismore                  | 940                       | 961   | 948   | 1343                      | 1461  | 1516  | 19                | 20.9  | 21.7  | 677   | 368                    | 454   | 0.5              | 0.2   | 0.8   | 0.1                             | 0.2   | 0.8   | -1                 | -1.4  | -2.2                         | >100           | >100    | 14      |                      |       |       |                          |         | 274                  | 255   | 210   | 1.2                    | 1.0     | -151                         | 617     | -1              | 3     |
| 23                                  | Bega Valley              | 1228                      | 1240  | 1284  | 1646                      | 1859  | 1856  | 24                | 26.7  | 26.7  | 330   | 638                    | 619   | -0.9             | -0.2  | -0.1  | -0.8                            | -0.1  | -0.1  | -2                 | -2.5  | -2.6                         | 0              | 0       | 0       |                      |       |       |                          |         | 266                  | 270   | 272   | 1.0                    | 1.0     | -702                         | -487    | -3              | -2    |
| 24                                  | Ballina                  | 1180                      | 1159  | 1141  | 1558                      | 1880  | 1125  | 22                | 26.7  | 16.2  | 2010  | 779                    | 579   | -0.2             | 0.1   | 0.9   | 0.2                             | 1.1   | 2.3   | 8                  | 10.7  | 16.9                         | 1              | 1       | 2       |                      |       |       |                          |         | 305                  | 303   | 305   | 1.1                    | 1.9     | -54                          | -10,138 | 0               | -63   |
| 25                                  | Kempsey                  | 1032                      | 1024  | 1040  | 1351                      | 1377  | 1643  | 17                | 17.2  | 20.6  | 600   | 555                    | 594   | -0.7             | -0.9  | 0.3   | -0.1                            | -0.2  | 0.9   | 8                  | 8.3   | 7.7                          | 0              | 0       | 1       |                      |       |       |                          |         | 255                  | 253   | 258   | 1.5                    | 1.3     | -4,596                       | -694    | -27             | -3    |
| 26                                  | Essential Energy         | 1468                      | 1600  | 1357  | 2203                      | 2025  | 1994  | 23                | 21.3  | 21.0  | 523   | 398                    | 619   |                  |       |       |                                 |       |       |                    |       |                              |                |         |         |                      |       |       |                          |         | 250                  | 357   | 455   | 1.7                    | 2.2     | 420                          | 676     | 2               | 3     |
| 27                                  | Byron                    | 1092                      | 1131  | 1162  | 1895                      | 2148  | 2237  | 21                | 24.0  | 25.1  | 231   | 184                    | 111   | -1.1             | 1.5   | 1.7   | 0.7                             | 3.3   | 3.3   | 21                 | 17.2  | 13.8                         | 0              | 2       | 2       |                      |       |       |                          |         | 156                  | 154   | 156   | 0.6                    | 0.6     | 2,036                        | 2,755   | 9               | 11    |
| Totals for >10,000 Properties       |                          | \$936M                    |       |       |                           |       |       |                   |       |       |   | 3 LWUs paid a dividend |       |                  |       |       |                                 |       |       |                    |       | 18 of 23 LWUs had a +ve NPAT |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |
| LWUs with 3,001 - 10,000 Properties |                          |                           |       |       |                           |       |       |                   |       |       |   |                        |       |                  |       |       |                                 |       |       |                    |       |                              |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |
| 29                                  | Armidale Dumaresq        | 870                       | 907   | 647   | 1895                      | 1756  | 1615  | 16                | 15.1  | 14.1  | 267   | 471                    | 644   | 2.0              | 1.3   | 2.4   | 1.8                             | 1.2   | 2.2   | -4                 | -5.6  | -7.0                         | >100           | >100    | >100    |                      |       |       |                          |         | 156                  | 161   | 123   | 1.1                    | 0.9     | 3,543                        | 4,887   | 23              | 35    |
| 30                                  | Griffith                 | 1174                      | 1198  | 1292  | 1866                      | 1816  | 1982  | 16                | 16.2  | 16.8  | 424   | 297                    | 159   | 0.8              | 0.7   | 0.6   | 1.0                             | 1.0   | 1.0   | 5                  | -4.5  | 2.0                          | 4              | 3       | 3       |                      |       |       |                          |         | 116                  | 68    | 127   | 0.4                    | 0.8     | 1,856                        | 1,674   | 11              | 10    |
| 31                                  | Lithgow                  | 967                       | 1067  | 1188  | 1474                      | 1674  | 1628  | 12                | 13.5  | 13.2  | 353   | 729                    | 262   | 1.6              | 2.4   | 0.4   | 2.8                             | 1.8</ |       |                    |       |                              |                |         |         |                      |       |       |                          |         |                      |       |       |                        |         |                              |         |                 |       |

### Table 5A: Water supply and sewerage indicators - financial

| WATER UTILITY                      |                   |      |      | FINANCIAL                 |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          |                                  |                      |        |                 |                        |       |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------|-------------------|------|------|---------------------------|-------|-------|---------------------------|-------|-------|-------------------|-------|-------|---|-------|-------|------------------|-------|-------|---------------------------------|-------|-------|--------------------|-------|-------|----------------------|-------|-------|------------------|-------|----------------------|--------------------------|----------------------------------|----------------------|--------|-----------------|------------------------|-------|------------------------------|-------|--------------|--|--|--|------------------------------|--|--|--|--|--|--|--|--|--|--|--|
|                                    |                   |      |      | Operating Cost (OMA)      |       |       | Income per Property       |       |       | Total Income      |       |       | Capital Expenditure<br>(Assets, Renewals,<br>Plant/Equip) |       |       | Return on Assets |       |       | Economic Real Rate<br>of Return |       |       | Net Debt to Equity |       |       | Interest Cover       |       |       | Dividend Payable |       |                      | Dividend<br>Payout Ratio |                                  | CSOs                 |        |                 | % Revenue<br>from CSOs |       | Net Profit after Tax<br>NPAT |       | NPAT Ratio   |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
|                                    |                   |      |      |                           |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          |                                  |                      |        |                 |                        |       |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
|                                    |                   |      |      | WS & SGE<br>(\$/property) |       |       | (\$/property)<br>WS & Sge |       |       | WS & Sge<br>(\$M) |       |       | WS & Sge<br>(\$ per prop)                                 |       |       | WS & Sge<br>(%)  |       |       | WS & Sge<br>(%)                 |       |       | WS & Sge<br>(%)    |       |       | WS & Sge<br>(\$'000) |       |       | WS & Sge<br>(%)  |       | WS & Sge<br>(\$'000) |                          |                                  | WS & Sge<br>(\$'000) |        | WS & Sge<br>(%) |                        |       |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
|                                    |                   |      |      | (23)<br>F13               |       |       | (24)<br>F7                |       |       | (24a)<br>F3       |       |       | (24b)<br>F28 + F29  |       |       | (24c)            |       |       | (25)<br>F19                     |       |       | (26)<br>F22        |       |       | (27)<br>F23          |       |       | (28)<br>F20      |       |                      | (29)<br>F21              |                                  | (30)<br>F25          |        |                 | (31)<br>F8             |       | (32)<br>F24                  |       | (32a)<br>F30 |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
|                                    |                   |      |      | 12/13                     | 13/14 | 14/15 | 12/13                     | 13/14 | 14/15 | 12/13             | 13/14 | 14/15 | 12/13   | 13/14 | 14/15 | 12/13            | 13/14 | 14/15 | 12/13                           | 13/14 | 14/15 | 12/13              | 13/14 | 14/15 | 12/13                | 13/14 | 14/15 | 12/13            | 13/14 | 14/15                | 13/14                    | 14/15                            | 12/13                | 13/14  | 14/15           | 13/14                  | 14/15 | 13/14                        | 14/15 |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 44                                 | Gunnedah          | 602  | 662  | 759                       | 1182  | 1496  | 1678                      | 6     | 6.7   | 7.3               | 277   | 316   | 655   | 2.8   | 4.0   | 4.8              | 2.0   | 3.2   | 4.0                             | -20   | -21.0 | -21.7              | >100  | >100  | >100                 |       |       |                  | 78    | 78                   | 77                       | 1.2                              | 1.1                  | 2,809  | 3,109           | 42                     | 43    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 46                                 | Narrabri          | 829  | 861  | 912                       | 1360  | 1774  | 1546                      | 6     | 8.0   | 6.8               | 124   | 222   | 407   | 8.4   | 4.3   | 1.9              | 6.2   | 3.2   | 1.0                             | -31   | -22.2 | -24.2              | >100  | >100  | >100                 |       |       |                  | 68    | 68                   | 66                       | 0.9                              | 1.0                  | 2,519  | 1,147           | 32                     | 17    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 43                                 | Tumut             | 830  | 862  | 1097                      | 1437  | 1347  | 1530                      | 6     | 6.0   | 6.9               | 632   | 153   | 243   | 1.2   | 0.7   | 0.0              | 1.4   | 1.3   | 0.1                             | 3     | 0.5   | -0.7               | 10    | 2     | 1                    |       |       |                  | 98    | 91                   | 88                       | 1.5                              | 1.3                  | -315   | -421            | -5                     | -6    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 49                                 | Young             | 393  | 537  | 585                       | 1230  | 1270  | 1383                      | 6     | 6.0   | 6.7               | 4357  | 1921  | 215   | 2.8   | 0.4   | 0.9              | 2.8   | 1.3   | 1.7                             | -8    | 5.8   | 2.9                | >100  | 1     | 2                    |       |       |                  | 85    | 85                   | 183                      | 1.4                              | 2.7                  | 54     | 294             | 1                      | 4     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 39                                 | Cowra             | 1114 | 1140 | 1188                      | 1810  | 1635  | 1893                      | 10    | 8.6   | 10.1              | 318   | 714   | 551   | 1.8   | 0.3   | 1.3              | 2.9   | 1.3   | 2.4                             | 5     | 5.9   | 5.7                | 3     | 1     | 2                    |       |       |                  | 108   | 108                  | 112                      | 1.3                              | 1.1                  | -612   | 291             | -7                     | 3     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 45                                 | Upper Hunter      | 960  | 1215 | 1112                      | 1785  | 1674  | 2103                      | 8     | 7.4   | 9.3               | 1296  | 434   | 925   | 3.7   | 0.8   | 3.5              | 3.2   | 0.5   | 3.2                             | -9    | -10.8 | -11.5              | >100  | >100  | >100                 |       | 30    | 1                | 76    | 82                   | 81                       | 1.1                              | 0.9                  | 600    | 2,832           | 8                      | 31    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 52                                 | Snowy River       | 774  | 732  | 670                       | 1187  | 1255  | 1301                      | 6     | 6.6   | 6.9               | 703   | 735   | 387   | 0.3   | 1.2   | 1.9              | 0.2   | 1.2   | 1.9                             | -4    | -6.3  | -8.4               | >100  | 46    |                      |       |       |                  | 38    | 6                    | 23                       | 0.1                              | 0.3                  | 649    | 1,159           | 10                     | 17    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 51                                 | Forbes            | 1258 | 1093 | 1136                      | 1221  | 1366  | 1423                      | 5     | 5.0   | 5.3               | 584   | 567   | 265   | -0.8  | -0.1  | 0.0              | -1.4  | -0.5  | -0.4                            | -14   | -15.3 | -15.8              | 0     | 0     | 0                    |       |       |                  | 121   | 71                   | 68                       | 1.4                              | 1.3                  | -48    | 16              | -1                     | 0     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 50                                 | Cooma-Monaro      | 1125 | 1160 | 1072                      | 1710  | 1591  | 1763                      | 6     | 5.8   | 6.5               | 428   | 841   | 690   | 0.9   | 0.9   | 1.6              | 0.6   | 0.6   | 1.3                             | -7    | -7.3  | -9.7               | >100  | >100  | >100                 |       |       |                  | 67    | 66                   | 66                       | 1.1                              | 1.0                  | -39    | 1,051           | -1                     | 16    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 53                                 | Berrigan          | 861  | 764  | 780                       | 1214  | 1332  | 1382                      | 4     | 4.7   | 4.9               | 123   | 148   | 54  | 0.9   | 2.5   | 2.7              | 0.4   | 1.9   | 2.1                             | -13   | -15.6 | -19.0              | >100  | >100  | >100                 |       |       |                  | 88    | 89                   | 92                       | 1.9                              | 1.9                  | 788    | 836             | 17                     | 17    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| Totals for 3,001 - 10,000 Props    |                   |      |      | \$204M                    |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          | No. of LWUs paying dividend is 2 |                      |        |                 |                        |       |                              |       |              |  |  |  | 21 of 22 LWUs had a +ve NPAT |  |  |  |  |  |  |  |  |  |  |  |
| LWUs with 1,501 - 3,000 Properties |                   |      |      |                           |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          |                                  |                      |        |                 |                        |       |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 48                                 | Leeton            | 1092 | 1093 | 1056                      | 1558  | 1415  | 1425                      | 6     | 5.5   | 5.8               | 311   | 477   | 718   | 1.3   | 0.4   | 0.7              | 0.2   | -0.5  | -0.1                            | -20   | -19.7 | -18.9              | >100  | 0     | 0                    |       |       |                  | 66    | 69                   | 69                       | 1.2                              | 1.2                  | -17    | 21              | 0                      | 0     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 54                                 | Deniliquin        | 951  | 968  | 956                       | 1605  | 1464  | 1500                      | 6     | 5.1   | 5.2               | 1500  | 137   | 180   | 3.8   | 2.2   | 1.6              | 3.5   | 1.9   | 1.2                             | -7    | -10.0 | -8.4               | >100  | >100  | >100                 |       | 192   | 21               | 73    | 73                   | 72                       | 1.4                              | 1.4                  | 727    | 916             | 14                     | 17    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 47                                 | Bellingen         | 940  | 1001 | 1053                      | 1172  | 1440  | 1307                      | 5     | 5.9   | 5.3               | 286   | 324   | 1838  | 0.6   | 1.6   | 0.9              | 0.0   | 0.9   | 0.0                             | -19   | -20.1 | -17.8              | 0     | >100  | >100                 |       |       |                  | 78    | 94                   | 89                       | 1.6                              | 1.7                  | 1,260  | 532             | 21                     | 10    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 60                                 | Glen Innes Severn | 685  | 694  | 677                       | 1063  | 1090  | 1074                      | 3     | 3.2   | 3.3               | 391   | 544   | 668   | 0.6   | 0.9   | 0.9              | 1.1   | 1.5   | 1.5                             | 4     | 5.7   | 6.1                | 2     | 3     | 3                    |       |       |                  | 73    | 74                   | 72                       | 2.3                              | 2.2                  | 263    | 200             | 8                      | 6     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 58                                 | Cootamundra       | 483  | 481  | 516                       | 1080  | 1216  | 1216                      | 3     | 3.6   | 3.7               |       | 35    | 70  | 1.4   | 1.8   | 0.9              | 1.4   | 1.8   | 0.9                             | -13   | -14.6 | -16.4              | 84    | >100  | >100                 |       |       |                  | 83    | 50                   | 55                       | 1.4                              | 1.5                  | 372    | 191             | 10                     | 5     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 57                                 | Wellington        | 950  | 976  | 927                       | 1587  | 1654  | 1816                      | 5     | 4.8   | 5.3               | 34    | 30    | 128   | 0.6   | 1.0   | 2.7              | 1.7   | 2.0   | 3.5                             | 16    | 11.4  | 6.1                | 2     | 2     | 4                    |       |       |                  | 61    | 58                   | 64                       | 1.2                              | 1.2                  | 219    | 955             | 5                      | 18    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 91                                 | Cabonne           | 1087 | 1056 | 1245                      | 2044  | 2160  | 2180                      | 2     | 2.5   | 2.6               | 734   | 567   | 1154  | -0.8  | -0.4  | -0.8             | -1.1  | -0.7  | -1.0                            | -7    | -3.6  | -3.5               | 0     | 0     | 0                    |       |       |                  | 41    | 39                   | 37                       | 1.6                              | 1.5                  | -283   | -500            | -11                    | -20   |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 80                                 | Greater Hume      | 795  | 822  | 848                       | 1366  | 1530  | 1689                      | 3     | 2.8   | 3.1               | 153   | 243   | 168   | -0.3  | 0.0   | 0.2              | -0.5  | -0.2  | 0.0                             | -5    | -6.0  | -6.5               | 0     | 0     | 0                    |       |       |                  | 45    | 45                   | 51                       | 1.6                              | 1.6                  | -14    | 104             | 0                      | 3     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 59                                 | Lachlan           | 1218 | 1292 | 1249                      | 1417  | 1430  | 1580                      | 4     | 4.0   | 4.5               | 334   | 284   | 950   | -0.4  | -0.7  | -1.0             | -1.2  | -1.5  | -1.5                            | -13   | -13.2 | -13.6              | 0     | 0     | 0                    |       |       |                  | 43    | 40                   | 40                       | 1.0                              | 0.9                  | -506   | -755            | -13                    | -17   |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 65                                 | Murray            | 774  | 786  | 809                       | 1285  | 1369  | 1430                      | 4     | 4.1   | 4.4               | 189   | 473   | 228   | 2.9   | 3.5   | 3.6              | 2.5   | 3.1   | 3.3                             | -10   | -10.0 | -12.5              | >100  | >100  | >100                 |       |       |                  | 57    | 59                   | 59                       | 1.4                              | 1.4                  | 1,161  | 1,227           | 28                     | 28    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 62                                 | Narromine         | 843  | 1013 | 1077                      | 1239  | 1285  | 1283                      | 3     | 2.7   | 2.7               | 201   | 385   | 488   | 2.1   | 2.7   | 1.6              | 1.3   | 1.9   | 0.7                             | -28   | -29.8 | -28.9              | >100  | >100  | >100                 |       |       |                  | 39    | 41                   | 41                       | 1.5                              | 1.5                  | 587    | 299             | 22                     | 11    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 56                                 | Yass Valley       | 1114 | 894  | 872                       | 1651  | 1649  | 1823                      | 5     | 5.3   | 5.9               | 2812  | 0     | 0   | 0.2   | 1.1   | 2.2              | 1.5   | 0.0   | 3.5                             | 20    | 20.6  | 18.3               | 1     | 2     | 3                    |       |       |                  | 44    | 47                   | 48                       | 0.9                              | 0.8                  | 504    | 981             | 9                      | 17    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 61                                 | Liverpool Plains  | 736  | 902  | 906                       | 1232  | 1487  | 1378                      | 3     | 4.1   | 3.8               | 2027  | 292   | 326   | 1.5   | 1.6   | 1.0              | 1.2   | 1.5   | 0.8                             | -5    | -6.7  | -7.7               | >100  | >100  | >100                 |       |       |                  | 60    | 57                   | 57                       | 1.4                              | 1.5                  | 1,139  | 719             | 27                     | 19    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 55                                 | Warrumbungle      | 889  | 1015 | 1105                      | 1161  | 1203  | 1187                      | 4     | 4.0   | 3.9               | 127   | 149   | 179   | 0.3   | 0.0   | -0.8             | 0.0   | -0.6  | -1.1                            | -5    | -6.6  | -7.5               | 0     | 0     | 0                    |       |       |                  | 86    | 56                   | 100                      | 1.4                              | 2.5                  | -71    | -462            | -2                     | -12   |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 71                                 | Palerang          | 1079 | 1093 | 1085                      | 1733  | 2025  | 2243                      | 4     | 4.5   | 5.0               | 2813  | 362   | 1138  | 0.6   | 0.5   | 1.4              | 1.0   | 1.3   | 2.0                             | 4     | 2.5   | 2.8                | 3     | 2     | 3                    |       |       |                  | 22    | 23                   | 23                       | 0.5                              | 0.5                  | 266    | 801             | 6                      | 16    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 63                                 | Narrandera        | 959  | 845  | 989                       | 1669  | 1419  | 1356                      | 4     | 2.9   | 2.8               | 1107  | 645   | 523   | 8.1   | 5.5   | 4.0              | 6.4   | 3.8   | 2.5                             | -30   | -29.6 | -27.2              | >100  | >100  | >100                 |       |       |                  | 59    | 44                   | 44                       | 1.5                              | 1.6                  | 933    | 621             | 32                     | 22    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 67                                 | Cobar             | 1056 | 1521 | 1271                      | 1423  | 1678  | 2214                      | 3     | 3.8   | 5.0               | 94    | 0     | 0   | 1.1   | -0.6  | 7.9              | 1.1   | -0.9  | 7.6                             | -6    | -8.6  | -14.7              | >100  | 0     | >100                 |       |       |                  | 25    | 24                   | 25                       | 0.6                              | 0.5                  | -128   | 1,620           | -3                     | 32    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 74                                 | Wentworth         | 719  | 784  | 784                       | 1548  | 1694  | 1655                      | 4     | 3.8   | 3.8               | 50    | 39    | 279   | 4.5   | 3.6   | 3.6              | 4.1   | 3.6   | 3.6                             | -8    | -12.1 | -14.6              | >100  | >100  | >100                 |       |       |                  | 36    | 36                   | 37                       | 0.9                              | 1.0                  | 1,179  | 1,204           | 31                     | 31    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 75                                 | Coonamble         | 593  | 531  | 673                       | 859   | 958   | 1032                      | 2     | 1.6   | 1.7               | 2911  | 347   | 177   | 1.4   | 0.4   | -0.1             | -0.1  | -0.6  | -0.8                            | -20   | -20.9 | -22.3              | 0     | 0     | 0                    |       |       |                  | 28    | 25                   | 22                       | 1.6                              | 1.3                  | -58    | -70             | -4                     | -4    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| Totals for 1,501 - 3,000 Props     |                   |      |      | \$78M                     |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          | No. of LWUs paying dividend is 1 |                      |        |                 |                        |       |                              |       |              |  |  |  | 15 of 19 LWUs had a +ve NPAT |  |  |  |  |  |  |  |  |  |  |  |
| LWUs with 200 - 1,500 Properties   |                   |      |      |                           |       |       |                           |       |       |                   |       |       |   |       |       |                  |       |       |                                 |       |       |                    |       |       |                      |       |       |                  |       |                      |                          |                                  |                      |        |                 |                        |       |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 70                                 | Kyogle            | 1034 | 1211 | 1169                      | 1126  | 1243  | 1250                      | 2     | 2.4   | 2.4               | 326   | 195   | 310   | -0.2  | -0.5  | 0.1              | 0.1   | -0.2  | 0.4                             | 2     | 1.1   | 0.3                | 0     | 0     | 1                    |       |       |                  | 53    | 53                   | 52                       | 2.2                              | 2                    | -237   | -102            | -10                    | -4    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 79                                 | Walgett           | 778  | 1946 | 675                       | 1218  | 1242  | 1621                      | 2     | 2.4   | 3.1               | 0     | 0     | 1038  | 0.1   | -6.9  | 4.9              | 0.2   | -6.5  | 4.5                             | -16   | -14.7 | -17.0              | 2     | 0     | >100                 |       |       |                  | 22    | 43                   | 21                       | 1.8                              | 1                    | -2,141 | 1,493           | -89                    | 48    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 68                                 | Tenterfield       | 1041 | 1034 | 1098                      | 1483  | 1773  | 1687                      | 3     | 3.6   | 3.4               | 357   | 331   | 668   | -0.3  | 1.2   | 0.5              | 0.3   | 1.6   | 0.8                             | 6     | 0.7   | 0.7                | 0     | 4     | 2                    |       |       |                  | 47    | 49                   | 49                       | 1.4                              | 2                    | 443    | 163             | 12                     | 5     |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 84                                 | Gilgandra         | 663  | 747  | 787                       | 1091  | 1336  | 1241                      | 2     | 1.8   | 1.7               | 198   | 330   | 274   | 0.2   | 1.1   | 0.5              | -0.2  | 0.7   | 0.1                             | -12   | -11.8 | -12.3              | 0     | >100  | >100                 |       |       |                  | 25    | 25                   | 26                       | 1.4                              | 2                    | -311   | -36             | -17                    | -2    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 73                                 | Upper Lachlan     | 810  | 906  | 1055                      | 1410  | 1463  | 1422                      | 3     | 2.9   | 2.8               | 1503  | 5095  | 349   | 3.2   | 2.0   | 0.1              | 2.7   | 1.8   | -0.1                            | -17   | -7.7  | -9.5               | >100  | >100  | 0                    |       |       |                  | 34    | 35                   | 37                       | 1.2                              | 1                    | 532    | -53             | 18                     | -2    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |
| 87                                 | Bourke            | 1220 | 1457 | 1472                      | 1531  | 1812  | 1961                      | 2     | 2.5   | 2.7               | 471   | 41    | 0   | 1.7   | 0.7   | 1.6              | 0.9   | -0.1  | 1.0                             | -16   | -16.9 | -13.4              | 0     | 0     | >100                 |       |       |                  | 11    | 11                   | 11                       | 0.4                              | 0                    | 141    | 294             | 6                      | 11    |                              |       |              |  |  |  |                              |  |  |  |  |  |  |  |  |  |  |  |



Table 5A: Water supply and sewerage indicators - financial

| WATER UTILITY                          |                                       | FINANCIAL                 |       |       |                           |       |       |                   |       |       |   |       |       |                                  |       |       |                                 |       |       |                    |       |       |                |       |       |                              |       |       |                          |       |                      |       |       |                        |       |                              |        |                 |       |
|--|---------------------------------------|---------------------------|-------|-------|---------------------------|-------|-------|-------------------|-------|-------|---|-------|-------|----------------------------------|-------|-------|---------------------------------|-------|-------|--------------------|-------|-------|----------------|-------|-------|------------------------------|-------|-------|--------------------------|-------|----------------------|-------|-------|------------------------|-------|------------------------------|--------|-----------------|-------|
|  |                                       | Operating Cost (OMA)      |       |       | Income per Property       |       |       | Total Income      |       |       | Capital Expenditure<br>(Assets, Renewals,<br>Plant/Equip) |       |       | Return on Assets                 |       |       | Economic Real Rate<br>of Return |       |       | Net Debt to Equity |       |       | Interest Cover |       |       | Dividend Payable             |       |       | Dividend<br>Payout Ratio |       | CSOs                 |       |       | % Revenue<br>from CSOs |       | Net Profit after Tax<br>NPAT |        | NPAT Ratio      |       |
|  |                                       | WS & SGE<br>(\$/property) |       |       | (\$/property)<br>WS & Sge |       |       | WS & Sge<br>(\$M) |       |       | WS & Sge<br>(\$ per prop)                                 |       |       | WS & Sge<br>(%)                  |       |       | WS & Sge<br>(%)                 |       |       | WS & Sge<br>(%)    |       |       | WS & Sge       |       |       | WS & Sge<br>(\$'000)         |       |       | WS & Sge<br>(%)          |       | WS & Sge<br>(\$'000) |       |       | WS & Sge<br>(%)        |       | WS & Sge<br>(\$'000)         |        | WS & Sge<br>(%) |       |
|  |                                       | (23)<br>F13               |       |       | (24)<br>F7                |       |       | (24a)<br>F3       |       |       | (24b)<br>F28 + F29  |       |       | (24c)                            |       |       | (25)<br>F19                     |       |       | (26)<br>F22        |       |       | (27)<br>F23    |       |       | (28)<br>F20                  |       |       | (29)<br>F21              |       | (30)<br>F25          |       |       | (31)<br>F8             |       | (32)<br>F24                  |        | (32a)<br>F30    |       |
|  |                                       | 12/13                     | 13/14 | 14/15 | 12/13                     | 13/14 | 14/15 | 12/13             | 13/14 | 14/15 | 12/13   | 13/14 | 14/15 | 12/13                            | 13/14 | 14/15 | 12/13                           | 13/14 | 14/15 | 12/13              | 13/14 | 14/15 | 12/13          | 13/14 | 14/15 | 12/13                        | 13/14 | 14/15 | 13/14                    | 14/15 | 12/13                | 13/14 | 14/15 | 13/14                  | 14/15 | 13/14                        | 14/15  | 13/14           | 14/15 |
| 86                                     | Hay                                   | 1021                      | 1110  | 1078  | 1462                      | 1479  | 1576  | 2                 | 2.0   | 2.1   | 212   | 150   | 159   | 0.9                              | 0.4   | 1.2   | 0.5                             | 0.1   | 0.9   | -14                | -15.7 | -17.3 | >100           | >100  | >100  |                              |       |       |                          |       | 24                   | 25    | 24    | 1.3                    | 1     | 76                           | 259    | 4               | 12    |
| 83                                     | Oberon                                | 1438                      | 1477  | 1236  | 1550                      | 1534  | 1767  | 2                 | 2.1   | 2.3   | 160   | 120   | 189   | -0.2                             | -0.9  | 2.1   | -0.4                            | -1.0  | 1.9   | -4                 | -3.8  | -7.1  | 0              | 0     | >100  |                              |       |       |                          |       | 20                   | 21    | 21    | 1.0                    | 1     | -171                         | 595    | -8              | 26    |
| 81                                     | Gwydir                                | 723                       | 706   | 862   | 1369                      | 1504  | 1404  | 2                 | 2.2   | 2.1   | 405   | 124   | 0     | -5.9                             | 5.4   | 2.2   | -5.6                            | 5.9   | 2.9   | -4                 | -6.2  | -5.2  | 0              | 12    | 4.0   |                              |       |       |                          |       | 45                   | 45    | 44    | 2.0                    | 2     | 354                          | 225    | 16              | 11    |
| 85                                     | Uralla                                | 819                       | 855   | 749   | 917                       | 1013  | 1038  | 1                 | 1.4   | 1.5   | 81  | 0     | 59    | 0.2                              | 0.1   | 0.9   | -0.7                            | -0.3  | 0.5   | -7                 | -8.5  | -10.7 | 0              | 0     | >100  |                              |       |       |                          |       | 31                   | 28    | 30    | 1.9                    | 2     | 24                           | 208    | 2               | 14    |
| 89                                     | Bogan                                 | 1320                      | 1695  | 2042  | 1985                      | 2146  | 2535  | 2                 | 2.4   | 3.0   | 0   | 171   | 0     | 1.9                              | 1.0   | 1.4   | 1.4                             | 0.4   | 0.9   | -12                | -14.0 | -15.0 | >100           | >100  | >100  |                              |       |       |                          |       | 32                   | 0     | 17    | 0.0                    | 1     | 99                           | 282    | 4               | 9     |
| 76                                     | Harden                                | 617                       | 628   | 979   | 1434                      | 1436  | 1601  | 3                 | 2.8   | 2.8   | 117   | 27    | 77    | 1.2                              | 1.4   | -0.4  | 0.8                             | 1.1   | -0.9  | -9                 | -11.8 | -13.3 | >100           | >100  | 0.0   |                              |       |       |                          |       | 39                   | 39    | 38    | 1.4                    | 1     | 289                          | -107   | 10              | -4    |
| 88                                     | Wakool                                | 1060                      | 1009  | 1050  | 684                       | 1439  | 1614  | 1                 | 2.2   | 2.3   | 1083  | 524   | 611   | 0.0                              | 0.3   | 0.4   | -0.4                            | 0.0   | 0.2   | -8                 | -8.0  | -8.5  | 0              | 0     | >100  |                              |       |       |                          |       | 27                   | 27    | 27    | 1.3                    | 1     | -61                          | 62     | -3              | 3     |
| 93                                     | Tumbarumba                            | 790                       | 761   | 825   | 1291                      | 1361  | 1479  | 2                 | 1.6   | 1.7   | 748   | 976   | 2926  | 0.1                              | 0.4   | 0.3   | 0.0                             | 0.3   | 0.5   | -5                 | -5.1  | -2.9  | >100           | >100  | 3     |                              |       |       |                          |       | 20                   | 20    | 20    | 1.3                    | 1     | 41                           | 14     | 3               | 1     |
| 94                                     | Gundagai                              | 1012                      | 1024  | 1173  | 1515                      | 1640  | 1721  | 1                 | 1.6   | 1.7   | 63  | 69    | 431   | 1.3                              | 2.0   | 1.1   | 0.9                             | 1.6   | 0.8   | -8                 | -10.7 | -12.2 | >100           | >100  | >100  |                              |       |       |                          |       | 23                   | 25    | 23    | 1.6                    | 1     | 364                          | 314    | 23              | 18    |
| 92                                     | Carrathool                            | 1369                      | 1187  | 1178  | 1750                      | 1538  | 1874  | 2                 | 2.0   | 2.3   | 390   | 1027  | 214   | -1.4                             | 0.9   | 2.4   | -1.4                            | 0.8   | 2.6   | 3                  | 3.8   | 1.9   | 0              | >100  | 15    |                              |       |       |                          | 14    | 15                   | 15    | 0.8   | 1                      | 178   | 474                          | 9      | 21              |       |
| 96                                     | Warren                                | 1124                      | 1092  | 982   | 1151                      | 1184  | 1237  | 1                 | 1.1   | 1.2   | 187   | 314   | 497   | -1.2                             | -1.1  | -0.4  | -2.4                            | -2.1  | -1.2  | -20                | -19.6 | -19.2 | 0              | 0     | 0     |                              |       |       |                          |       | 19                   | 18    | 18    | 1.6                    | 2     | -176                         | -73    | -15             | -6    |
| 98                                     | Walcha                                | 983                       | 1061  | 1052  | 1118                      | 1103  | 1048  | 1                 | 1.0   | 1.0   | 31  | 76    | 143   | 0.0                              | -0.3  | -0.9  | -0.3                            | -0.5  | -1.2  | -7                 | -7.6  | -7.4  | 0              | 0     | 0     |                              |       |       |                          |       | 22                   | 18    | 18    | 1.8                    | 2     | -53                          | -188   | -5              | -20   |
| 100                                    | Balranald                             | 745                       | 846   | 819   | 1080                      | 1331  | 1481  | 1                 | 1.2   | 1.3   | 106   | 0     | 0     | -1.1                             | 0.1   | 0.4   | -0.9                            | 0.2   | 0.7   | -2                 | -4.2  | -6.9  | 0              | 1     | 2     |                              |       |       |                          |       | 0                    | 0     | 13    | 0.0                    | 1     | -6                           | 77     | 0               | 6     |
| 97                                     | Bombala                               | 823                       | 849   | 911   | 1078                      | 1152  | 1238  | 1                 | 1.0   | 1.1   | 138   | 162   | 106   | -0.8                             | -0.8  | -0.6  | -1.4                            | -1.3  | -1.2  | -13                | -13.8 | -14.9 | 0              | 0     | 0     |                              |       |       |                          |       | 19                   | 20    | 19    | 2.0                    | 2     | -189                         | -152   | -18             | -14   |
| 101                                    | Murrumbidgee                          | 577                       | 666   | 596   | 806                       | 832   | 819   | 1                 | 0.7   | 0.6   | 107   | 53    | 151   | -0.1                             | -0.5  | 0.1   | -0.7                            | -1.1  | -0.5  | -15                | -15.4 | -16.3 | 0              | 0     | 0     |                              |       |       |                          |       | 17                   | 12    | 12    | 1.8                    | 2     | -66                          | 8      | -10             | 1     |
| 90                                     | Guyra                                 | 874                       | 1001  | 1109  | 1247                      | 1699  | 1401  | 2                 | 2.1   | 1.8   | 80  | 65    | 64    | 0.2                              | 0.3   | -0.3  | -0.1                            | 0.1   | -0.6  | -4                 | -6.0  | -6.8  | 0              | >100  | 0     |                              |       |       |                          | 30    | 30                   | 29    | 1.4   | 2                      | 329   | -123                         | 16     | -7              |       |
| 104                                    | Boorowa                               | 983                       | 953   | 1054  | 1573                      | 1577  | 1431  | 1                 | 1.0   | 0.9   | 459   | 116   | 449   | -0.2                             | -0.2  | -0.1  | -0.6                            | -0.5  | -0.5  | 0                  | -10.5 | -10.8 | 0              | 0     | 0     |                              |       |       |                          |       | 15                   | 17    | 17    | 1.7                    | 2     | -158                         | -301   | -15             | -32   |
| 105                                    | Brewarrina                            | 1720                      | 2033  | 2222  | 3531                      | 4269  | 3164  | 2                 | 2.1   | 1.5   | 103   | 1066  | 231   | 5.2                              | 0.0   | -0.2  | 5.1                             | 6.2   | 0.0   | -14                | -11.4 | -16.5 | >100           | 0     | 0     |                              |       |       |                          |       | 4                    | 4     | 4     | 0.2                    | 0     | -51                          | -97    | -2              | -7    |
| 106                                    | Jerilderie                            | 1042                      | 1125  | 1157  | 1298                      | 1398  | 1357  | 1                 | 0.7   | 0.7   | 94  | 63    | 244   | 1.3                              | 0.8   | 0.0   | -0.8                            | -0.9  | -1.5  | -28                | -25.1 | -26.7 | 0              | 0     | 0     |                              |       |       |                          |       | 10                   | 10    | 10    | 1.5                    | 2     | -24                          | -48    | -4              | -7    |
| 103                                    | Central Darling                       | 1825                      | 1716  | 1142  | 1268                      | 3951  | 2931  | 1                 | 2.9   | 2.2   | 0   | 0     | 0     | -1.6                             | 4.1   | 2.4   | -1.6                            | 4.2   | 2.6   | 0                  | -3.0  | -1.8  | 0              | >100  | >100  |                              |       |       |                          |       | 0                    | 0     | 0     | 0.0                    | 0     | 1,071                        | 695    | 37              | 32    |
| Totals for 200 - 1,500 Props           |                                       | \$50M                     |       |       |                           |       |       |                   |       |       |   |       |       | No. of LWUs paying dividend is 0 |       |       |                                 |       |       |                    |       |       |                |       |       | 15 of 26 LWUs had a +ve NPAT |       |       |                          |       |                      |       |       |                        |       |                              |        |                 |       |
| LWUs with a single service (WS or Sge) |                                       |                           |       |       |                           |       |       |                   |       |       |   |       |       |                                  |       |       |                                 |       |       |                    |       |       |                |       |       |                              |       |       |                          |       |                      |       |       |                        |       |                              |        |                 |       |
| 4                                      | Rous (Bulk Supplier) (NO SGE)         | 234                       | 238   | 268   | 430                       | 475   | 554   | 20                | 22.2  | 22.8  | 55  |       |       | 0.8                              | 1.2   | 1.3   | 1.1                             | 1.7   | 1.8   | 6                  | 4.2   | 5.1   | 4              | 3     | 4     |                              |       |       |                          |       | 10                   | 10    | 10    | 0.0                    | 0.0   | 1,890                        | 2,523  | 9               | 11    |
| 8                                      | Riverina (Groundwater) (NO SGE)       | 384                       | 338   | 277   | 855                       | 921   | 1019  | 25                | 27.2  | 30.4  | 188   | 209   | 397   | 3.6                              | 5.6   | 7.9   | 3.5                             | 5.3   | 7.5   | -4                 | -7.0  | -8.9  | >100           | >100  | >100  |                              |       |       |                          |       | 212                  | 225   | 194   | 0.8                    | 0.6   | 6,931                        | 11,244 | 25              | 37    |
| 12                                     | Fish River WS (Bulk Supplier, NO SGE) |                           |       |       | 427                       | 426   |       | 9                 | 10.0  | 10.0  | 17  |       |       | 10.9                             | 15.6  |       | 10.9                            | 15.6  |       | 0                  | 0.0   |       |                |       |       |                              |       |       |                          |       | 0                    | 0     |       | 0.0                    |       | 4,492                        |        | 45              |       |
| 28A                                    | Goldenfields (Reticulator) (NO SGE)   | 809                       | 811   | 664   | 1159                      | 1330  | 1437  | 12                | 13.6  | 14.8  |   |       |       | 1.4                              | 2.7   | 4.0   | 1.1                             | 2.3   | 3.6   | -9                 | -9.4  | -12.6 | >100           | >100  | >100  |                              |       |       |                          |       | 101                  | 98    | 97    | 0.7                    | 0.7   | 4,069                        | 5,909  | 30              | 40    |
| 28B                                    | Goldenfields (Bulk) (NO SGE)          | 147                       | 146   | 152   | 251                       | 252   | 286   | 5                 | 4.9   | 5.5   |   |       |       | 1.2                              | 1.3   | 0.5   | 0.7                             | 0.9   | 0.0   | -10                | -11.1 | -14.9 | >100           | >100  | >100  |                              |       |       |                          |       | 0                    | 0     | 0     | 0.0                    | 0.0   | 862                          | 322    | 17              | 6     |
| 40                                     | Central Tablelands (NO SGE)           | 565                       | 552   | 626   | 950                       | 963   | 956   | 5                 | 5.2   | 5.2   | 199   | 87    | 154   | 0.7                              | 0.9   | 0.1   | 0.7                             | 1.0   | 0.1   | -1                 | -3.8  | -5.5  | 64             | 9     | 4     |                              |       |       |                          |       | 58                   | 57    | 57    | 1.1                    | 1.1   | 284                          | 74     | 5               | 1     |
| 9                                      | Wagga Wagga (NO WS)                   | 413                       | 417   | 418   | 642                       | 632   | 721   | 17                | 16.6  | 19.6  | 138   | 180   | 161   | -0.3                             | -0.5  | 0.5   | 0.5                             | 0.3   | 1.3   | 6                  | 6.1   | 5.3   | 1              | 0     | 2     |                              |       |       |                          |       | 158                  | 160   | 159   | 1.0                    | 0.8   | -1,343                       | 1,052  | -8              | 5     |
| 30A                                    | Hawkesbury (NO WS)                    | 555                       | 549   | 563   | 726                       | 718   | 755   | 6                 | 5.5   | 5.8   | 464   | 188   | 46    | -0.1                             | -0.2  | -0.3  | -0.2                            | -0.4  | -0.3  | -5                 | 2.9   | 1.4   | 0              | 0     | 0     |                              |       |       |                          |       | 38                   | 41    | 40    | 0.7                    | 0.7   | -109                         | -252   | -2              | -4    |
| 69                                     | Temora (NO WS)                        | 231                       | 229   | 179   | 307                       | 321   | 348   | 1                 | 0.7   | 0.8   | 158   | 0     | 0     | 0.3                              | 0.1   | 1.7   | 0.0                             | 0.0   | 1.5   | -8                 | -6.5  | -7.5  | 0              | 0     | >100  |                              |       |       |                          |       | 26                   | 25    | 26    | 3.6                    | 3.5   | 24                           | 184    | 3               | 24    |
| 72                                     | Bland (NO WS)                         | 357                       |       |       |                           |       |       |                   |       |       |   |       |       |                                  |       |       |                                 |       |       |                    |       |       |                |       |       |                              |       |       |                          |       |                      |       |       |                        |       |                              |        |                 |       |

Table 5B: Water supply & sewerage - levels of service, environmental, main sources of water supply

| WATER UTILITY                       |                         | LEVELS OF SERVICE                   |                                     |                                     |   |              |              | ENVIRONMENTAL            |       |          |       |       |       |       |       | MAIN SOURCES OF WATER SUPPLY   |  |           |     |              |                 |                               |   |                                  |                                 |
|-------------------------------------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|--------------|--------------|--------------------------|-------|----------|-------|-------|-------|-------|-------|--|--|-----------|-----|--------------|-----------------|-------------------------------|---|----------------------------------|---------------------------------|
|                                     |                         | Billing Complaints<br>WS & Sge      |                                     |                                     | % of calls Answered<br>by Operator within<br>30 seconds |              |              | Greenhouse Gas Emissions |       |          |       |       |       |       |       | Surface Water Supply   |  |           |     |              |                 | Groundwater                   |   | Bulk Supplier<br>(potable water) | Coastal<br>(C) or<br>Inland (I) |
|                                     |                         |                                     |                                     |                                     |   |              |              | Water                    |       | Sewerage |       | Other |       | Total |       | Major Sources of Water   |  |           |     | Storage Dams |                 | Bulk Raw<br>Water<br>Supplier | >50% of<br>Supply<br>from Grnd<br>Water |                                  |                                 |
|                                     |                         | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties)                     | (36)         | (37)         | (38)                     | (39)  | (40)     | (41)  | (41a) |       |       |       |  |  |           |     |              |                 |                               |   |                                  |                                 |
|                                     |                         | (per 1000 properties)               | (%)                                 | (35a)<br>E9                         | (35b)<br>E10  | (35c)<br>E11 | (35d)<br>E12 |                          |       |          |       |       |       |       |       |  |  |           |     |              |                 |                               |   |                                  |                                 |
|                                     | 12/13                   | 13/14                               | 14/15                               | 12/13                               | 13/14   | 14/15        | 13/14        | 14/15                    | 13/14 | 14/15    | 13/14 | 14/15 | 13/14 | 14/15 |       |  |  |           |     |              |                 |                               |   |                                  |                                 |
|                                     | Sydney Water            | 3                                   | 2                                   | 1                                   | 86  | 83           | 79           | 69                       | 63    | 118      | 126   | -99   | -102  | 85    | 84    |  |  |           |     |              |                 |                               |   |                                  |                                 |
|                                     | Hunter Water            | 2                                   | 2                                   | 2                                   | 79  | 71           | 70           | 116                      | 103   | 285      | 105   | 24    | 17    | 412   | 220   |  |  |           |     |              |                 |                               |   |                                  |                                 |
| LWUs with > 10,000 Properties       |                         |                                     |                                     |                                     |   |              |              |                          |       |          |       |       |       |       |       |  |  |           |     |              |                 |                               |   |                                  |                                 |
| 1                                   | Gosford                 |                                     |                                     |                                     |   |              |              | 153                      | 161   | 229      | 284   | 24    | 24    | 401   | 462   | Wyong R, Ourimbah Ck, Mooney Mooney Ck and Mangrove Ck.  | Mangrove Ck (190GL),<br>Mooney Ck (4.6GL)                                      | GW JWA    | 22  |              |                 | C                             |   |                                  |                                 |
| 2                                   | Wyong                   | 0                                   |                                     |                                     | 32  | 33           | 34           | 166                      | 174   | 264      | 290   | 16    | 2     | 441   | 459   | Wyong R, Ourimbah Ck, Mooney Mooney Ck, Mangrove Ck and two-way transfers from/to Hunter Water.  | Mardi (7.4GL)  | GW JWA    | 12  |              |                 | C                             |   |                                  |                                 |
| 3                                   | Shoalhaven              | 0                                   | 0                                   | 0                                   | 100   | 96           | 96           | 147                      | 180   | 253      | 282   | 5     | 6     | 377   | 437   | Porters Ck, Kangaroo R & Shoalhaven R to supply Berry & Kangaroo Valley down to Lake Tabourie.   | Danjera (7.8GL), Porters Ck (1.9GL),<br>Bamarang (3.8GL), Flat Rock Ck (570ML) |           |     |              |                 | C                             |   |                                  |                                 |
| 5                                   | MidCoast                | 1                                   | 1                                   | 1                                   |   |              |              | 219                      | 226   | 263      | 263   | 26    | 25    | 483   | 490   | Manning R to Bootawa Dam to supply Manning, from Crawford & Karuah R to supply Bulahdelah & Stroud, a bore and Barrington R to supply Gloucester and Barrington. | Bootawa (2.28GL)   |           | 15  |              |                 | C                             |   |                                  |                                 |
| 6                                   | Tweed                   |                                     | 0                                   | 1                                   | 51  | 56           | 48           | 175                      | 155   | 271      | 264   | 7     | 6     | 441   | 413   | Tweed R to supply Murwillumbah, Tweed Heads & the Tweed Coast villages including Bogangar & Mooball.   | Clarrie Hall (16GL)  |           |     |              |                 | C                             |   |                                  |                                 |
| 7                                   | Port Macquarie-Hastings | 0                                   | 0                                   | 0                                   | 77  | 75           | 84           | 146                      | 178   | 263      | 260   | 0     | 0     | 386   | 416   | Hastings R to supply Port Macquarie, Wauchope and the Camden Haven areas.  | Cowarra (10GL), Port Macquarie (2.5GL)   |           | 1   |              |                 | C                             |   |                                  |                                 |
| 10                                  | Coffs Harbour           | 0                                   | 0                                   | 0                                   | 99  | 99           | 99           | 103                      | 109   | 267      | 363   | 6     | 35    | 362   | 487   | Nymboida R (via Shannon Ck Dam) & Orara R to Karangi Dam to supply Coffs Harbour.  | Karangi (5.6GL), Woolgoolga (270ML)  |           |     |              | Clarence Valley | C                             |   |                                  |                                 |
| 11                                  | Albury City             | 0                                   | 0                                   | 0                                   |   | 26           | 30           | 262                      | 236   | 203      | 168   | 0     | 1     | 451   | 393   | Murray River to supply Albury.   |  | Water NSW |     |              |                 | I                             |   |                                  |                                 |
| 13                                  | Tamworth Regional       | 0                                   | 0                                   | 0                                   |   |              |              | 214                      | 186   | 227      | 228   | 0     | 0     | 419   | 393   | Peel R & Dungowan Ck to supply Tamworth: Manilla R, Barraba Ck & Connors Ck Dam to supply Barraba: Namoi R & Manilla R to supply Manilla.                        | Dungowan (5.7GL), Connors Ck (360ML)   | Water NSW | 14  |              |                 | I                             |   |                                  |                                 |
| 14                                  | Clarence Valley         | 1                                   | 2                                   | 2                                   |   |              |              | 19                       | 69    | 139      | 74    |       |       | 114   | 119   | Nymboida R to supply Grafton, Maclean, Yamba, Iluka, and other villages  | Shannon Creek (30GL)   |           |     |              |                 | C                             |   |                                  |                                 |
| 15                                  | Eurobodalla             | 0                                   | 0                                   | 0                                   | 84  |              | 100          | 159                      | 136   | 204      | 205   | 16    | 35    | 363   | 359   | Tuross R, Buckenboursa R & Moruya R to supply Batemans Bay, Moruya, Narooma & Tuross Hd.   | Deep Creek (4.9GL)   |           | 5   |              |                 | C                             |   |                                  |                                 |
| 16                                  | Wingecarribee           | 0                                   | 0                                   | 0                                   | 66  | 79           | 53           | 230                      | 162   | 260      | 337   | 23    | 30    | 467   | 469   | Wingecarribee Dam & Bundanoon Ck to supply Mittagong, Berrima, Bowral, Moss Vale, Exeter, Bundanoon, Burrawang, Robertson & other villages.                      | Bundanoon, Medway (3.3GL)  | Water NSW |     |              |                 | C                             |   |                                  |                                 |
| 17                                  | Queanbeyan              | 4                                   | 2                                   | 2                                   |   |              |              | 15                       | 13    | 146      | 164   | 7     | 7     | 170   | 184   | Queanbeyan is a reticulater. 98% of supply is a fully treated bulk water supply.   |  |           |     |              | ACTEW           | I                             |   |                                  |                                 |
| 18                                  | Dubbo                   | 0                                   | 0                                   | 0                                   | 89  | 89           | 87           | 306                      | 296   | 204      | 207   | 2     | 2     | 499   | 491   | Macquarie R and groundwater (21ML/d) to supply Dubbo.  |  | Water NSW | 7   |              |                 | I                             |   |                                  |                                 |
| 19                                  | Orange                  | 0                                   | 8                                   |                                     |   |              |              | 221                      | 204   | 199      | 207   | 5     | 5     | 416   | 405   | Spring Ck, Suma Pk, Gosling Ck to supply Orange. Blackmans Swamp Ck and Ploughmans Ck emergency stormwater harvesting (1,300ML/a).                               | Suma Pk (18.1GL), Spring Ck (4.43GL),<br>Gosling Ck (650ML)                    |           | 6   |              |                 | I                             |   |                                  |                                 |
| 20                                  | Goulburn Mulwaree       | 0                                   | 0                                   | 0                                   |   |              |              | 118                      | 99    | 472      | 346   | 20    | 18    | 618   | 449   | Wollondilly R to supply Goulburn and Marulan.  | Pejar (9GL), Sooley (6.25GL)   |           |     |              |                 | C                             |   |                                  |                                 |
| 21                                  | Bathurst Regional       | 0                                   | 0                                   | 0                                   |   |              |              | 172                      | 158   | 191      | 177   |       |       | 362   | 337   | Macquarie R and Campbell R to supply Bathurst.   | Ben Chifley (30.4GL), Winburndale (1.8GL)                                      |           | 2   |              |                 | I                             |   |                                  |                                 |
| 22                                  | Lismore                 | 1                                   | 2                                   | 0                                   | 80  | 80           | 80           | 20                       | 27    | 242      | 220   | 12    | 10    | 248   | 233   | Lismore Council is a reticulater with a fully treated bulk water supply.   | Nimbin (25ML)  |           |     |              | Rous            | C                             |   |                                  |                                 |
| 23                                  | Bega Valley             | 1                                   | 0                                   | 0                                   | 72  | 79           | 87           | 118                      | 107   | 219      | 239   | 39    | 32    | 343   | 342   | Towamba R (aquifer), Tantawanglo Ck, Bega R (aquifer), Bemboka R, Brogo R, Illawambra Ck, Couria Ck.   | Yellow Pinch (3GL), Ben Boyd (800ML),<br>Tilba (135ML)                         |           | Yes | 11           |                 | C                             |   |                                  |                                 |
| 24                                  | Ballina                 | 0                                   |                                     | 0                                   |   |              |              | 13                       | 13    | 419      | 384   |       |       | 425   | 390   | Council is a reticulater. 93% of supply is fully treated bulk supply. 7% from Richmond R & g/water (1.2ML/d).  | Marom (66ML)   |           | 2   |              | Rous            | C                             |   |                                  |                                 |
| 25                                  | Kempsey                 | 0                                   | 0                                   | 0                                   | 49  | 48           | 45           | 198                      | 162   | 172      | 151   | 16    | 43    | 349   | 323   | Macleay R and g/water (71ML/d) to supply Kempsey, South West Rocks, Crescent Head & Hat Head.  | Steuart McIntyre (2.5GL), other (400ML)  |           | Yes | 37           |                 | C                             |   |                                  |                                 |
| 26                                  | Essential Energy        | 0                                   | 0                                   | 0                                   | 76  | 78           | 78           | 886                      | 732   | 48       | 50    |       |       | 930   | 779   | Water is drawn from local sources at Broken Hill and from Menindee Lakes.  | Stephens Ck (24GL), Imperial Lk (700ML),<br>Umberumberka (13GL)                |           |     |              |                 | I                             |   |                                  |                                 |
| 27                                  | Byron                   | 2                                   | 2                                   | 2                                   |   |              |              | 6                        | 6     | 172      | 169   |       |       | 167   | 166   | Council is a reticulater for 85% of supply (fully treated bulk water). 15% of the supply, including Mullumbimby is provided by Byron.                            | Wilson R (136ML)   |           |     |              | Rous            | C                             |   |                                  |                                 |
| LWUs with 3,001 - 10,000 Properties |                         |                                     |                                     |                                     |   |              |              |                          |       |          |       |       |       |       |       |  |  |           |     |              |                 |                               |   |                                  |                                 |
| 29                                  | Armidale Dumaresq       | 0                                   | 0                                   | 0                                   |   |              |              | 140                      | 129   | 122      | 107   | 3     | 11    | 262   | 244   | Macleay River to supply Armidale.  | Malpas (13GL), Oaky R (2.7GL),<br>Puddledock Ck (930ML)                        |           |     |              |                 |                               | C                                       |                                  |                                 |
| 30                                  | Griffith                | 0                                   | 0                                   | 0                                   |   |              |              | 261                      | 274   | 206      | 202   | 2     | 2     | 425   | 445   | Murrumbidgee Irrigation Area Main Canal to supply Griffith.  | Griffith (360ML)   | Water NSW |     |              |                 |                               | I                                       |                                  |                                 |
| 31                                  | Lithgow                 |                                     | 6                                   |                                     | 100   |              | 100          | 62                       |       | 179      |       |       |       | 228   |       | Council is a reticulater for 39% of supply, remaining from Farmers Ck Dam to supply Lithgow.   | Farmers Creek (1.5GL)  |           |     |              | Fish River WS   | C                             |   |                                  |                                 |
| 32                                  | Mid-Western Regional    | 0                                   |                                     | 0                                   |   |              |              | 201                      | 197   | 143      | 203   | 3     | 4     | 333   | 384   | Cudgegong R to supply Rylstone and Kandos and Cudgegong R and groundwater (13ML/d) to supply Mudgee and Gulgong.   | Rylstone (3.32GL)  |           | 28  |              |                 | I                             |   |                                  |                                 |
| 33                                  | Richmond Valley         |                                     |                                     |                                     |   |              |              |                          |       |          |       |       |       |       |       | Casino has run-of-river supply from Richmond R. Supply for Lower River (20% of total) from Rous.   |  | Water NSW |     |              | Rous            | C                             |   |                                  |                                 |
| 34                                  | Nambucca                |                                     |                                     |                                     | 100   | 100          | 100          | 115                      | 159   | 203      | 214   |       |       | 297   | 351   | Groundwater to supply Nambucca Heads, Macksville, Bowraville, South Head and Valla Beach.  |  |           | Yes | 10           |                 | C                             |   |                                  |                                 |
| 35                                  | Singleton               | 0                                   | 0                                   | 0                                   |   |              |              | 154                      | 192   | 84       | 108   | 8     | 11    | 233   | 294   | Hunter River and Glennies Creek to supply Singleton.   |  | Water NSW | 13  |              |                 | C                             |   |                                  |                                 |
| 36                                  | Parkes                  | 8                                   | 3                                   | 3                                   | 100   | 100          | 100          | 435                      | 650   | 558      | 547   | 14    | 16    | 922   | 1,131 | Billabong Ck, Beargamil Ck & g/water (26ML/d) to supply Parkes & Peak Hill. 8% of supply is from Forbes.   | Lk Endeavour (2.4GL), Beargamil (480ML)  | Water NSW | 7   |              | Forbes          | I                             |   |                                  |                                 |



Table 5B: Water supply & sewerage - levels of service, environmental, main sources of water supply

| WATER UTILITY                      |                   | LEVELS OF SERVICE              |             |                                     |   |                                     |                                     | ENVIRONMENTAL            |          |       |       |       |                        |      |      | MAIN SOURCES OF WATER SUPPLY   |   |           |              |                               |   |              |   |                                  |                                 |  |  |  |  |  |  |
|------------------------------------|-------------------|--------------------------------|-------------|-------------------------------------|---|-------------------------------------|-------------------------------------|--------------------------|----------|-------|-------|-------|------------------------|------|------|--|---|-----------|--------------|-------------------------------|---|--------------|---|----------------------------------|---------------------------------|--|--|--|--|--|--|
|                                    |                   | Billing Complaints<br>WS & Sge |             |                                     | % of calls Answered<br>by Operator within<br>30 seconds |                                     |                                     | Greenhouse Gas Emissions |          |       |       |       |                        |      |      | Surface Water Supply   |   |           |              |                               |   | Groundwater  |   | Bulk Supplier<br>(potable water) | Coastal<br>(C) or<br>Inland (I) |  |  |  |  |  |  |
|                                    |                   |                                |             |                                     |   |                                     |                                     | Water                    | Sewerage | Other |       | Total | Major Sources of Water |      |      |  |   |           | Storage Dams | Bulk Raw<br>Water<br>Supplier | >50% of<br>Supply<br>from Grnd<br>Water | No.<br>Bores |   |                                  |                                 |  |  |  |  |  |  |
|                                    |                   | (per 1000 properties)          | (%)         | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties)                     | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (36)                     |          |       |       |       |                        | (37) | (38) | (39)   | (40)                                    | (41)      | (41a)        |                               |   |              |   |                                  |                                 |  |  |  |  |  |  |
|                                    |                   | (33)<br>C12                    | (34)<br>C14 | (35a)<br>E9                         | (35b)<br>E10  | (35c)<br>E11                        | (35d)<br>E12                        |                          |          |       |       |       |                        |      |      |  |   |           |              |                               |   |              |   |                                  |                                 |  |  |  |  |  |  |
| 12/13                              | 13/14             | 14/15                          | 12/13       | 13/14                               | 14/15   | 13/14                               | 14/15                               | 13/14                    | 14/15    | 13/14 | 14/15 | 13/14 | 14/15                  |      |      |  |   |           |              |                               |   |              |   |                                  |                                 |  |  |  |  |  |  |
| 37                                 | Inverell          | 1                              | 1           | 1                                   | 100   | 100                                 | 100                                 | 129                      | 123      | 136   | 140   | 17    | 16                     | 262  | 250  | Gwydir R and groundwater (1ML/d) to supply Inverell, Yetman and Ashford.   | Lk Inverell (1.5GL)                     | Water NSW |              | 1                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 38                                 | Moree Plains      | 18                             | 13          | 0                                   | 99  | 99                                  |                                     | 122                      | 243      | 236   | 396   |       |                        | 333  | 583  | Groundwater (18ML/d) to supply Moree, Mungindi and Bogabilla.  | 2 dams (150ML)                          |           | Yes          | 14                            |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 39                                 | Cowra             | 1                              | 2           | 0                                   | 100   | 100                                 | 100                                 | 301                      | 276      | 138   | 140   | 0     | 0                      | 394  | 370  | Lachlan River and 2 bores to supply Cowra.   | Koorawatha (200ML)                      | Water NSW |              | 2                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 41                                 | Muswellbrook      | 0                              | 1           | 1                                   |   |                                     |                                     | 0                        | 0.2      | 41    | 39    | 15    | 15                     | 56   | 53   | Hunter River and groundwater (0.5ML/d) to supply Muswellbrook and Denman.  |   | Water NSW |              | 3                             |   |              | C |                                  |                                 |  |  |  |  |  |  |
| 42                                 | Corowa            | 0                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 210                      | 141      | 149   | 94    |       | 2                      | 353  | 233  | Murray River and Mulwala Lake to supply Corowa and Mulwala.  |   | Water NSW |              | 2                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 43                                 | Tumut             | 8                              | 2           | 3                                   | 99  | 99                                  | 99                                  | 187                      | 163      | 201   | 200   | 4     | 4                      | 382  | 355  | Tumut R to supply Tumut, Little Gilmore Ck to supply Batlow, Nimbo Ck to supply Brungle, Jounama Ck to supply Talbingo & Adelong Ck.   | Batlow (82ML)                           | Water NSW |              | 3                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 44                                 | Gunnedah          | 0                              | 1           | 3                                   |   | 95                                  | 97                                  | 316                      | 301      | 67    | 70    |       |                        | 375  | 365  | Groundwater (26ML/d) & Namoi R to supply Gunnedah, Curlewis, Mullaley and Tambar Springs.  |   |           | Yes          | 17                            |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 45                                 | Upper Hunter      | 4                              | 6           | 1                                   | 99  | 99                                  | 99                                  |                          |          |       |       |       |                        |      |      | Hunter River & groundwater (5ML/d) to supply Scone, Aberdeen, Merriwa, Cassilis, Murrurundi & Willow Tree.   | Murrurundi (170ML)                      | Water NSW |              | 9                             |   |              | C |                                  |                                 |  |  |  |  |  |  |
| 46                                 | Narrabri          | 8                              | 7           | 1                                   | 100   | 100                                 | 100                                 | 0                        |          | 291   | 397   | 556   |                        | 811  | 358  | Namoi R & groundwater (34.5ML/d) to supply Narrabri, Wee Waa, Boggabri, Pilliga, Bellata & Gwabegar.   |   |           | Yes          | 11                            |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 47                                 | Bellingen         | 2                              | 1           | 2                                   | 95  | 95                                  | 97                                  | 169                      | 146      | 357   | 330   |       |                        | 434  | 392  | Bellinger R to supply Dorrigo & groundwater (4ML/d) to supply Bellingen.   | 1 dam (54ML)                            |           | Yes          | 4                             |   |              | C |                                  |                                 |  |  |  |  |  |  |
| 48                                 | Leeton            | 0                              | 0           | 1                                   | 100   | 100                                 | 100                                 |                          |          |       |       |       |                        |      |      | Murrumbidgee Irrigation Area Main Northern Canal to supply Leeton, Yanco, Murrami & Whitton.   | Leeton, 2 others (270ML)                | Water NSW |              |                               |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 49                                 | Young             | 1                              | 1           | 2                                   | 95  | 95                                  | 95                                  | 4                        | 4        | 186   | 183   | 12    | 12                     | 166  | 159  | Council is a reticulator with a fully treated bulk water supply.   |   |           |              |                               |   | Goldenfields | I |                                  |                                 |  |  |  |  |  |  |
| 50                                 | Cooma-Monaro      | 0                              | 2           | 1                                   | 98  | 100                                 | 100                                 | 10                       | 158      | 10    | 227   |       | 23                     | 19   | 385  | Murrumbidgee River & groundwater (0.7ML/d) to supply Cooma, Bredbo & Nimmitabel.   | 1 dam for Nimmitabel (100ML)            |           |              | 4                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 51                                 | Forbes            | 0                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 314                      | 263      | 276   | 177   | 21    | 19                     | 573  | 434  | Lachlan River & groundwater (7.3ML/d) to supply Forbes & Ootha.  |   | Water NSW |              | 2                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 52                                 | Snowy River       | 10                             | 10          | 8                                   | 99  | 99                                  | 99                                  | 151                      | 142      | 146   | 147   | 5     | 5                      | 289  | 282  | Snowy River to supply Jindabyne, Berridale, Adaminaby, Dalgety & Kalkite.  |   | Water NSW |              | 1                             |   |              | C |                                  |                                 |  |  |  |  |  |  |
| 53                                 | Berrigan          | 19                             | 15          | 14                                  | 98  | 99                                  | 98                                  | 64                       | 65       | 279   | 274   | 0     | 0                      | 343  | 342  | Mulwala Canal, DWR Channel & Murray River to supply Berrigan, Finley & Tocumwal.   | 4 dams (260ML)                          | Water NSW |              |                               |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 54                                 | Deniliquin        | 0                              | 4           | 4                                   |   | 85                                  | 50                                  | 303                      | 304      | 425   | 416   | 30    | 30                     | 719  | 721  | Edward River to supply Deniliquin.   |   | Water NSW |              | 1                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 55                                 | Warrumbungle      | 33                             | 8           | 42                                  |   |                                     | 100                                 | 185                      | 116      | 141   | 152   | 15    | 16                     | 309  | 248  | Castlereagh R & groundwater (18.3ML/d) to supply Dunedoo, Coolah, Mendooran, Coonabarabran, Baradine, Binnaway, Bugaldie & Kenerbi.  | Timor (1.14GL)                          |           |              | 6                             |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 56                                 | Yass Valley       | 8                              | 17          | 14                                  | 95  | 95                                  | 95                                  | 103                      | 132      | 172   | 184   | 13    |                        | 240  | 271  | Yass River and groundwater (0.3ML/d) to supply Yass. Raising of dam is underway to a capacity of 2.47GL.   | Yass (1.13GL)                           |           |              | 5                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| LWUs with 1,501 - 3,000 Properties |                   |                                |             |                                     |   |                                     |                                     |                          |          |       |       |       |                        |      |      |  |   |           |              |                               |   |              |   |                                  |                                 |  |  |  |  |  |  |
| 57                                 | Wellington        | 8                              | 10          | 0                                   | 99  | 99                                  | 95                                  | 337                      | 277      | 211   | 196   | 17    | 17                     | 546  | 473  | Macquarie River to supply Wellington.  |   | Water NSW |              | 2                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 58                                 | Cootamundra       | 2                              | 8           | 8                                   | 98  | 98                                  | 98                                  | 8                        | 10       | 175   | 235   | 5     | 6                      | 178  | 236  | Council is a reticulator with a fully treated bulk water supply.   |   |           |              |                               |   | Goldenfields |   | I                                |                                 |  |  |  |  |  |  |
| 59                                 | Lachlan           | 6                              | 8           |                                     | 100   | 100                                 |                                     | 358                      |          | 115   |       | 16    |                        | 462  |      | Lachlan River and groundwater (2ML/d) to supply Lachlan, Tottenham and Lake Cargelligo.  | 5 dams (112ML)                          | Water NSW |              | 4                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 60                                 | Glen Innes Severn | 0                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 96                       | 84       | 107   | 109   | 9     | 9                      | 207  | 191  | Beardy Waters and Mann River to supply Glen Innes and by a weir on the Mole River to supply Deepwater.   | Beardy Waters (500ML)                   |           |              | 2                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 61                                 | Liverpool Plains  | 56                             | 51          | 38                                  | 90  | 95                                  | 95                                  |                          |          |       |       |       |                        |      |      | Groundwater (12ML/d) to supply Quirindi; Hunter R to supply Murrurundi & Willow Tree; Coepolly Ck, Cockburn R & 7 wells to supply Werris Ck, Kootingal, Moonbi, Attunga & Bendemeer. | Quipolly (5.4GL)                        |           | Yes          | 12                            |   |              | I |                                  |                                 |  |  |  |  |  |  |
| 62                                 | Narromine         | 4                              | 2           | 0                                   |   |                                     |                                     | 171                      | 159      | 119   | 69    | 51    | 49                     | 333  | 272  | Groundwater (18ML/d) to supply Narromine, Trangie and Tomingley.   | 2 dams (52ML)                           |           | Yes          | 8                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 63                                 | Narrandera        | 2                              | 2           |                                     | 80  | 95                                  | 80                                  | 0                        |          | 0     |       | 0     |                        |      |      | G/water (18ML/d) to supply Narrandera. A bulk water supply from Goldenfields is provided to part of Narrandera.  |   |           | Yes          | 4                             | Goldenfields                            |              | I |                                  |                                 |  |  |  |  |  |  |
| 65                                 | Murray            | 0                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 171                      | 176      | 129   | 227   |       |                        | 305  | 410  | Murray River and Gulpa Creek to supply Moama and Mathoura.   |   | Water NSW |              | 1                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 67                                 | Cobar             | 7                              | 5           | 0                                   | 90  | 95                                  | 95                                  | 122                      |          | 138   | 138   | 7     | 2                      | 235  | 108  | Bulk water supply. Bogan River to supply Cobar.  | Cobar (1.82GL), 4 others                | Cobar WB  |              | 1                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 68                                 | Tenterfield       | 5                              | 5           | 15                                  | 95  | 95                                  | 95                                  | 104                      | 110      | 116   | 102   |       |                        | 203  | 197  | Tenterfield Creek and groundwater (1ML/d) to supply Tenterfield, Urbenville and Jennings.  | Tenterfield Ck (1.15GL)                 |           |              | 1                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 70                                 | Kyogle            | 1                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 231                      | 247      | 81    | 90    | 23    | 23                     | 326  | 350  | Clarence River to supply Kyogle, Bonalbo and Woodenbong.   | Bonalbo (47ML)                          |           |              | 3                             |   |              |   | C                                |                                 |  |  |  |  |  |  |
| 71                                 | Palerang          | 14                             | 2           | 2                                   | 95  | 100                                 | 100                                 | 176                      | 134      | 139   | 159   | 0     | 0                      | 308  | 283  | Shoalhaven R to supply Braidwood, Molonglo R to dam to supply Captain's Flat & groundwater (4.8ML/d) to supply Bungendore.   | Captains Flat (820ML), Braidwood (80ML) |           |              | 5                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 73                                 | Upper Lachlan     | 0                              | 0           | 0                                   | 90  | 90                                  | 90                                  | 127                      | 126      |       |       |       |                        | 127  | 126  | Kentgrove Creek to supply Crookwell and groundwater (2ML/d) to supply Gunning and Dalton.  | Crookwell (450ML), other (25ML)         |           |              | 6                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 74                                 | Wentworth         |                                | 2           | 1                                   |   | 100                                 | 100                                 | 608                      |          | 214   |       |       |                        | 758  |      | Murray R & Darling R to provide a dual supply for Wentworth, Buronga, Gol Gol, Dareton and Pooncarie.  |   | Water NSW |              |                               |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 75                                 | Coonamble         |                                | 0           | 0                                   | 90  | 99                                  | 95                                  | 313                      | 352      | 102   | 109   | 11    | 11                     | 402  | 440  | Groundwater (11.7ML/d) to supply Coonamble.  |   |           | Yes          | 6                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 76                                 | Harden            | 15                             | 7           | 7                                   | 99  | 100                                 | 99                                  |                          | 15       |       | 86    |       | 3                      | 64   |      | Council is a reticulator with a fully treated bulk water supply.   |   |           |              |                               |   | Goldenfields |   | I                                |                                 |  |  |  |  |  |  |
| 79                                 | Walgett           | 2                              |             | 0                                   | 90  |                                     | 90                                  |                          |          |       |       |       |                        |      |      | Namoi River and groundwater (5ML/d) to supply Walgett, Collarenebri and Lightning Ridge.   |   | Water NSW |              | 6                             |   |              |   | I                                |                                 |  |  |  |  |  |  |
| 80                                 | Greater Hume      | 0                              | 0           | 0                                   | 100   | 100                                 | 100                                 | 142                      | 115      | 115   | 87    | 33    | 32                     | 338  | 269  | Council is mostly a reticulator serving Hume Villages with a fully treated bulk supply. G/water (4ML/d) to Culcairn.   |   |           |              | 2                             | Albury, Riverina                        |              |   | I                                |                                 |  |  |  |  |  |  |



Table 5B: Water supply & sewerage - levels of service, environmental, main sources of water supply

| WATER UTILITY                    | LEVELS OF SERVICE                     |       |       |   |       |       | ENVIRONMENTAL                       |                                     |                                     |                                     |                        |       | MAIN SOURCES OF WATER SUPPLY |   |       |   |              |                               |   |              |                                  |  |           |     |    |               |   |   |   |
|----------------------------------|---------------------------------------|-------|-------|---|-------|-------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------|-------|------------------------------|---|-------|---|--------------|-------------------------------|---|--------------|----------------------------------|--|-----------|-----|----|---------------|---|---|---|
|                                  | Billing Complaints<br>WS & Sge        |       |       | % of calls Answered<br>by Operator within<br>30 seconds |       |       | Greenhouse Gas Emissions            |                                     |                                     |                                     |                        |       | Surface Water Supply         |   |       |   |              |                               | Groundwater                             |              | Bulk Supplier<br>(potable water) | Coastal<br>(C) or<br>Inland (I)                      |           |     |    |               |   |   |   |
|                                  |                                       |       |       |   |       |       | Water                               | Sewerage                            | Other                               | Total                               | Major Sources of Water |       |                              |   |       |   | Storage Dams | Bulk Raw<br>Water<br>Supplier | >50% of<br>Supply<br>from Grnd<br>Water | No.<br>Bores |                                  |  |           |     |    |               |   |   |   |
|                                  | (per 1000 properties)                 |       |       | (%)   |       |       | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (tonnes CO2 per<br>1000 properties) | (36)                   |       |                              |   |       |   | (37)         | (38)                          | (39)                                    | (40)         | (41)                             | (41a)  |           |     |    |               |   |   |   |
|                                  | 12/13                                 | 13/14 | 14/15 | 12/13   | 13/14 | 14/15 | 13/14                               | 14/15                               | 13/14                               | 14/15                               | 13/14                  | 14/15 | 13/14                        | 14/15   | 13/14 | 14/15   |              |                               |   |              |                                  |  |           |     |    |               |   |   |   |
| LWUs with 200 - 1,500 Properties |                                       |       |       |   |       |       |                                     |                                     |                                     |                                     |                        |       |                              |   |       |   |              |                               |   |              |                                  |  |           |     |    |               |   |   |   |
| 81                               | Gwydir                                | 0     | 1     | 1   |       |       |                                     | 56                                  | 52                                  |                                     |                        | 44    | 41                           | Gwydir R to supply Bingara & g/water (5ML/d) to supply Warialda, Gravesend & North Star. System is non-potable. |       |   |              |                               |   |              | Water NSW                        | Yes  | 9         |     |    | I             |   |   |   |
| 83                               | Oberon                                | 5     | 5     | 5   | 95    | 95    | 95                                  | 142                                 | 146                                 | 57                                  | 56                     |       |                              | 194   | 200   | Council is a reticulator with a bulk water supply from Fish River.  |              |                               |   |              |                                  |  |           |     |    | Fish River WS | I |   |   |
| 84                               | Gilgandra                             | 12    | 7     | 12  | 80    | 80    |                                     | 357                                 | 381                                 | 77                                  | 277                    | 47    | 14                           | 483   | 650   | Groundwater (8.5ML/d) to supply Gilgandra   |              |                               |   |              |                                  |  |           | Yes | 5  |               |   | I |   |
| 85                               | Uralla                                | 21    | 17    | 8   | 98    | 98    | 97                                  | 132                                 | 114                                 | 174                                 | 209                    | 7     | 8                            | 274   | 283   | Kentucky Creek and Gwydir River to supply Uralla and Bundarra.  |              |                               |   |              |                                  | Kentucky Ck (500ML)                                  |           |     |    |               |   | I |   |
| 86                               | Hay                                   | 2     | 2     | 2   | 50    | 50    | 50                                  | 41                                  | 41                                  | 137                                 | 137                    | 41    | 41                           | 213   | 213   | Murrumbidgee River to supply Hay.   |              |                               |   |              |                                  |  | Water NSW |     |    |               |   | I |   |
| 87                               | Bourke                                | 8     | 15    | 13  | 90    | 90    | 90                                  | 33                                  | 217                                 | 130                                 | 105                    | 22    | 23                           | 170   | 332   | A weir on the Darling River to supply Bourke.   |              |                               |   |              |                                  |  |           |     | 1  |               |   | I |   |
| 88                               | Wakool                                | 0     | 7     | 8   | 100   | 100   | 100                                 |                                     |                                     |                                     |                        |       |                              |   |       | Murray River to supply Barham and Murray Downs.   |              |                               |   |              |                                  | 1 dam (130ML)  | Water NSW |     |    |               |   | I |   |
| 89                               | Bogan                                 | 0     | 0     | 0   | 90    | 90    |                                     | 168                                 | 300                                 | 194                                 | 223                    | 28    | 39                           | 361   | 518   | Bogan River to supply Nyngan.   |              |                               |   |              |                                  |  | Water NSW |     |    |               |   | I |   |
| 90                               | Guyra                                 | 3     | 1     | 2   | 96    | 97    | 97                                  | 352                                 | 279                                 | 140                                 | 108                    | 11    | 8                            | 496   | 389   | Gara River to supply Guyra.   |              |                               |   |              |                                  | Guyra (375ML), Tingha (90ML)                         |           |     |    |               |   | I |   |
| 91                               | Cabonne                               | 13    | 9     | 9   | 100   | 100   | 100                                 | 159                                 |                                     | 117                                 |                        | 3     |                              | 378   |       | Molong Creek, Buckinbah River, the Bell River and groundwater (0.4ML/d) to supply Molong, Cumnock and Yeoval.   |              |                               |   |              |                                  | Borenore Ck (230ML), Molong Ck (1GL), Cumnock (20ML) |           |     | 7  |               |   | I |   |
| 92                               | Carrathool                            | 9     | 9     | 0   | 100   | 100   | 100                                 | 1199                                | 1073                                | 112                                 | 63                     | 0     | 66                           | 1,272   | 1,182 | Murrumbidgee Irrig. Area Canal & g/water (15ML/d) to supply Hillston, Goolgowi, Rankins Springs & Carrathool.   |              |                               |   |              |                                  | 3 dams (184ML)                                       |           | Yes | 9  |               |   | I |   |
| 93                               | Tumbarumba                            | 3     | 1     | 3   | 100   | 100   | 100                                 | 37                                  | 84                                  | 72                                  | 77                     | 2     | 3                            | 101   | 153   | Murray River and groundwater (0.4ML/d) to supply Tumbarumba and Khancoban.  |              |                               |   |              |                                  | Tumbarumba (70ML)                                    |           |     | 2  |               |   | I |   |
| 94                               | Gundagai                              | 4     | 22    |   | 98    | 98    |                                     | 357                                 |                                     | 183                                 |                        | 5     |                              | 515   |       | Murrumbidgee River to supply Gundagai.  |              |                               |   |              |                                  |  | Water NSW |     |    |               |   | I |   |
| 96                               | Warren                                | 26    | 21    | 10  | 95    | 95    | 90                                  | 0                                   | 137                                 | 0                                   | 746                    | 0     | 17                           |   | 805   | Macquarie River and groundwater (3.5ML/d).  |              |                               |   |              |                                  |  | Water NSW |     | 5  |               |   | I |   |
| 97                               | Bombala                               | 0     | 11    | 13  | 100   | 100   | 100                                 | 96                                  | 348                                 | 169                                 | 169                    | 0     | 0                            | 242   | 494   | Coolumbooka River, Delegate River and Snowy River to supply Bombala and Delegate.   |              |                               |   |              |                                  | Coolumbooka (215ML)                                  |           |     |    |               |   | C |   |
| 98                               | Walcha                                | 0     | 0     | 0   | 100   | 100   | 100                                 | 213                                 |                                     | 200                                 |                        | 59    |                              | 443   |       | MacDonald River to supply Walcha.   |              |                               |   |              |                                  | Walcha (80ML)  |           |     |    |               |   | C |   |
| 100                              | Balranald                             | 0     |       |   | 100   |       |                                     | 174                                 | 176                                 | 200                                 | 200                    |       |                              | 360   | 363   | Murrumbidgee R to supply Balranald & Euston.  |              |                               |   |              |                                  |  | Water NSW |     |    |               |   | I |   |
| 101                              | Murrumbidgee                          | 0     |       |   |       |       |                                     |                                     |                                     |                                     |                        |       |                              |   |       | Groundwater (13ML/d) to supply Darlington Point and Coleambally.  |              |                               |   |              |                                  |  |           | Yes | 4  |               |   | I |   |
| 103                              | Central Darling                       | 54    | 80    | 54  | 95    | 95    | 95                                  | 270                                 | 378                                 | 224                                 | 59                     | 0     | 0                            | 385   | 408   | Groundwater (1ML/d), Wallandra Creek and Darling River to supply Wilcannia, Ivanhoe and Whitecliffs.  |              |                               |   |              |                                  | 4 dams (575ML)                                       |           |     | 3  |               |   | I |   |
| 104                              | Boorowa                               | 2     | 9     | 8   | 99    |       | 100                                 | 188                                 | 197                                 | 24                                  | 14                     | 5     | 6                            | 217   | 217   | Boorowa River to supply Boorowa.  |              |                               |   |              |                                  | Boorowa (335ML)                                      |           |     | 2  |               |   | I |   |
| 105                              | Brewarrina                            | 19    | 6     | 2   | 100   | 100   |                                     | 418                                 | 498                                 | 98                                  | 94                     | 8     | 4                            | 527   | 598   | Barwon River and groundwater (0.9ML/d) to supply Brewarrina and Goolooga.   |              |                               |   |              |                                  | 1 dam (73ML)   |           |     | 1  |               |   | I |   |
| 106                              | Jerilderie                            | 0     | 0     | 2   | 95    | 100   | 100                                 | 120                                 | 204                                 | 51                                  | 56                     | 12    | 12                           | 178   | 265   | Billabong Creek to supply Jerilderie.   |              |                               |   |              |                                  |  | Water NSW |     |    |               |   |   | I |
| LWUs without Sewerage            |                                       |       |       |   |       |       |                                     |                                     |                                     |                                     |                        |       |                              |   |       |   |              |                               |   |              |                                  |  |           |     |    |               |   |   |   |
| 4                                | Rous (Bulk Supplier) (NO SGE)         |       | 0     | 0   | 95    | 95    |                                     | 107                                 |                                     |                                     |                        | 11    |                              | 117   |       | Rocky Ck, Duck Ck & Emigrant Ck to provide a fully treated bulk water supply to Byron, Richmond Valley, Lismore & Ballina.  |              |                               |   |              |                                  | Rocky Ck (14GL), Emigrant Ck (820ML)                 |           |     | 3  |               |   | C |   |
| 8                                | Riverina (Groundwater) (NO SGE)       | 3     | 4     | 1   | 98    | 98    | 98                                  | 353                                 | 364                                 |                                     |                        | 19    | 8                            | 372   | 372   | Murrumbidgee River and groundwater (117ML/d) to supply Wagga Wagga, Holbrook, Lockhart and Henty.   |              |                               |   |              |                                  | 3 dams (30ML)  | Water NSW | Yes | 28 |               |   | I |   |
| 12                               | Fish River WS (Bulk Supplier, NO SGE) |       | 0     |   | 100   | 100   | 100                                 | 45                                  |                                     |                                     |                        |       |                              | 45  |       | Oberon R & Duckmaloi R to provide a bulk water supply to Oberon & Lithgow councils, Pacific Power & Sydney Water.   |              |                               |   |              |                                  | Oberon (45GL), Duckmaloi Weir                        |           |     |    |               |   | I |   |
| 28A                              | Goldenfields (Reticulator) (NO SGE)   |       |       | 0   |       |       |                                     | 390                                 | 379                                 |                                     |                        | 17    | 16                           | 407   | 395   | Council reticulates water to Bland, Coolamon, Junee, Temora and part of Narrandera.   |              |                               |   |              |                                  |  |           |     |    | Goldenfields  | I |   |   |
| 28B                              | Goldenfields (Bulk) (NO SGE)          |       |       |   |       |       |                                     | 330                                 | 330                                 |                                     |                        | 15    | 14                           | 345   | 343   | Murrumbidgee R & g/water (42.5ML/d) to supply Cootamundra, Harden, Young & Goldenfields Reticulation area.  |              |                               |   |              |                                  |  | Water NSW | Yes | 6  |               |   | I |   |
| 40                               | Central Tablelands (NO SGE)           | 0     | 0     | 0   | 98    | 98    | 98                                  | 280                                 | 242                                 |                                     |                        | 4     | 3                            | 285   | 245   | Lake Rowlands and groundwater (7ML/d) to Blayney, Canowindra, Grenfell, Eugowra, Millthorpe, Mandurama, Lyndhurst, Carcoar, Manildra, Cargo, Cudal, Woodstock & Gooloogong. |              |                               |   |              |                                  | Lk Rowlands (4.5GL), Bogolong (360ML)                |           |     | 7  |               |   | I |   |
| 66                               | Cobar Water Board (Bulk) (NO SGE)     |       |       |   | 100   |       |                                     |                                     |                                     |                                     |                        |       |                              |   |       | Bulk raw water is supplied to Cobar and the mines.  |              |                               |   |              |                                  | 4 dams (1.1GL) Nyngan, Cobar                         |           |     |    |               |   | I |   |
| LWUs without Water Supply        |                                       |       |       |   |       |       |                                     |                                     |                                     |                                     |                        |       |                              |   |       |   |              |                               |   |              |                                  |  |           |     |    |               |   |   |   |
| 9                                | Wagga Wagga (NO WS)                   |       | 0     | 0   | 100   | 100   |                                     |                                     | 177                                 | 147                                 |                        |       |                              | 177   | 147   |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 30A                              | Hawkesbury (NO WS)                    |       | 0     | 0   |       |       |                                     |                                     | 54                                  | 95                                  |                        |       |                              | 54  | 95    |   |              |                               |   |              |                                  |  |           |     |    |               |   | C |   |
| 69                               | Temora (NO WS)                        |       | 0     | 0   | 0     | 100   | 100                                 |                                     | 53                                  | 52                                  | 0                      | 0     |                              | 53  | 53    |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 72                               | Bland (NO WS)                         |       | 0     | 0   | 0     | 95    | 95                                  |                                     | 68                                  | 68                                  | 0                      | 0     |                              | 68  | 68    |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 77                               | Junee (NO WS)                         |       | 0     | 0   | 0     | 100   | 100                                 |                                     | 334                                 | 332                                 |                        |       |                              | 334   | 332   |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 78                               | Blayney (NO WS)                       |       | 0     | 0   | 0     | 100   | 100                                 |                                     | 145                                 | 152                                 |                        |       |                              | 145   | 152   |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 95                               | Weddin (NO WS)                        |       | 0     | 0   | 1     | 90    | 90                                  |                                     | 38                                  | 38                                  | 0                      | 0     |                              | 38  | 38    |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 99                               | Coolamon (NO WS)                      |       | 0     | 0   | 0     |       |                                     |                                     | 83                                  | 81                                  |                        |       |                              | 83  | 81    |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 102                              | Lockhart (NO WS)                      |       | 0     | 0   | 0     | 95    | 95                                  |                                     | 195                                 | 135                                 | 8                      | 9     |                              | 203   | 144   |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |
| 107                              | Urana (NO WS)                         |       | 0     | 0   | 0     | 99    | 99                                  |                                     | 0                                   | 0                                   | 0                      | 0     |                              |   |       |   |              |                               |   |              |                                  |  |           |     |    |               |   | I |   |

NOTE:

1. 61 LWUs have a storage dam (col 37), 34 LWUs receive a bulk raw water supply from Water NSW (col 38); 60 LWUs have a groundwater supply (col 40), of which 14 obtain >50% of their water supply from groundwater (col 39); 14 LWUs receive a bulk potable water supply from another urban water utility (col 41).



Table 5C: Water Supply - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY                 |                          | WATER SUPPLY INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                                 |                          |                           |                          |                  |                |                          |          |                                   |    |    |    |   |                               | SYSTEM PERFORMANCE            |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              | BPM                      |                                    |  |                              |                                  |      |       |       |      |      |
|-------------------------------|--------------------------|---|--------------------------|-------------------------------|--|---------------------|--|---------------------------------|--------------------------|---------------------------|--------------------------|------------------|----------------|--------------------------|----------|-----------------------------------|----|----|----|---|-------------------------------|-------------------------------|---|------------------------------------|---------------------|--------------------|------------------------------|----------------------|------------------------------------|---------------|--------------------------|--------------------------|------------------------------|--------------------------|------------------------------------|--|------------------------------|----------------------------------|------|-------|-------|------|------|
|                               |                          | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint-enance Cost | Mains Maint-enance Cost  | Rehabilitations           |                          |                  | Asset Renewals |                          |          | Assets in Condition as a % of WDV |    |    |    |   | Renewals Ratio                | Backlog Ratio                 | Asset Maintenance Ratio                   | Capital Expenditure Ratio          | Operating Cost      | Net Debt to Equity | Economic Real Rate of Return | Water Main Breaks    | Unplanned Inter-ruptions to Supply | Real Loss     | Water Quality Complaints | Water Service Complaints | % Popn with micro Compliance | Typical Residential Bill | Drinking Water Mgmt System (DWMS)? | No. Water Treatment Operators Meeting Nat'l Cert'n Rqmts | Best-Practice Implementation |                                  |      |       |       |      |      |
|                               |                          | \$/property F9/C4   | \$'000                   | \$'000 F9                     | \$'000                                     | \$'000 F14          | \$'000   | \$'000                          | \$'000 per 100km of Main | Mains (% of Total Length) | Service Conn-ections (%) | Water Meters (%) | \$'000         | \$'000 per 100km of Main | % of CRC | WS Assets (56)                    |    |    |    |   | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F11 | WS & SGE % F22     | WS % F17                     | Per 100km of main A8 | per 1000 properties C17            | L/d/co nn A10 | No. / 1000 props C9      | No. / 1000 props C10     | % of population H3           | \$/ assessment P3        | Yes/No                             | No.  | Overall %                    | Strategic Business Plan (Yes/No) |      |       |       |      |      |
|                               |                          |   |                          |                               |  |                     |  |                                 |                          |                           |                          |                  |                |                          |          | 1                                 | 2  | 3  | 4  | 5 |                               |                               |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              |                          |                                    |  |                              |                                  |      |       |       |      |      |
|                               |                          | (42)  | (43)                     | (44)                          | (45)                                       | (46)                | (47)   | (48)                            | (49)                     | (50)                      | (51)                     | (52)             | (53)           | (54)                     | (55)     |                                   |    |    |    |   |                               |                               |   |                                    |                     | (57)               | (58)                         | (59)                 | (60)                               | (61)          | (62)                     | (63)                     | (64)                         | (65)                     | (66)                               | (67)   | (68)                         | (69)                             | (70) | (70a) | (70b) | (71) | (72) |
|                               | Sydney Water Corporation | 6,600   |                          | 12,400,000                    |  | 150,100             |  |                                 |                          |                           |                          |                  |                |                          |          |                                   |    |    |    |   |                               |                               |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              |                          |                                    |  |                              |                                  |      |       |       |      |      |
|                               | Hunter Water Corporation | 10,000  |                          | 2,420,000                     |  | 36,700              |  |                                 |                          |                           |                          |                  |                |                          |          |                                   |    |    |    |   |                               |                               |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              |                          |                                    |  |                              |                                  |      |       |       |      |      |
| LWUs with > 10,000 Properties |                          |   |                          |                               |  |                     |  |                                 |                          |                           |                          |                  |                |                          |          |                                   |    |    |    |   |                               |                               |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              |                          |                                    |  |                              |                                  |      |       |       |      |      |
|                               | Gosford                  | 7,670   | 952,000                  | 551,000                       | 14,585                                     | 6,780               | 10,249   | 7,267                           | 490                      | 0.4                       | -                        | 3.4              | 3,682          | 373                      | 0.4      | 23                                | 41 | 20 | 13 | 2 | 0.35                          | 0.02                          | 1.05                                      | 0.46                               | 331                 | 6                  | 1.3                          | 17                   | 126                                | 60            | 12                       | -                        | 100                          | 507                      | Yes                                | 4  | 100                          | Yes+                             |      |       |       |      |      |
| 2                             | Wyong                    | 15,100  | 1,471,000                | 956,000                       | 17,471                                     | 15,850              | 1,851  | 4,964                           | 292                      | 0.1                       | 0.9                      | 1.3              | 12,368         | 1,015                    | 0.8      | 19                                | 80 | 1  | 0  | 0 | 0.68                          | 0.01                          | 0.67                                      | 0.91                               | 319                 | 9                  | 1.5                          | 16                   | 57                                 | 30            | 10                       | 6                        | 100                          | 508                      | Yes                                | 3  | 100                          | Yes*                             |      |       |       |      |      |
| 3                             | Shoalhaven               | 7,570   | 621,000                  | 357,000                       | 7,730                                      | 10,280              | 0  | 3,526                           | 72                       | 1.2                       | 0.7                      | 8.4              | 2,470          | 164                      | 0.4      | 66                                | 34 | 0  | 0  | 0 | 0.42                          | 0.00                          | 1.00                                      | 1.14                               | 276                 | -1                 | 1.7                          | 8                    | 78                                 | 90            | 1                        | 1                        | 100                          | 309                      | Yes                                | 8  | 100                          | Yes+                             |      |       |       |      |      |
| 4                             | Rous (Bulk Supplier)     |   | 465,000                  | 326,000                       | 6,053                                      | 12,120              | 4,410  | 1,089                           | 169                      | 1.1                       |                          | 0.5              | 2,022          | 459                      | 0.4      | 3                                 | 46 | 39 | 11 | 1 |                               |                               |   |                                    | 268                 | 5                  | 1.8                          | 10                   | 1                                  |               | 0                        | 0                        | 100                          |                          | Yes                                | 4  | 100                          | Yes*                             |      |       |       |      |      |
| 5                             | MidCoast                 | 11,300  | 684,000                  | 436,000                       | 9,612                                      | 3,090               | 34,319   | 4,889                           | 253                      | 0.4                       | -                        | 2.6              | 2,409          | 173                      | 0.4      | 49                                | 33 | 16 | 1  | 1 | 0.30                          | 0.07                          | 0.31                                      | 0.24                               | 477                 | 22                 | 0.7                          | 9                    | 6                                  | 60            | 3                        | 4                        | 100                          | 587                      | Yes                                | 15   | 100                          | Yes*                             |      |       |       |      |      |
| 6                             | Tweed                    | 15,400  | 661,000                  | 495,000                       | 7,145                                      | 1,960               | 10,836   | 1,845                           | 125                      | -                         | -                        | 4.1              | 469            | 66                       | 0.1      | 80                                | 16 | 4  | 0  | 0 | 0.07                          | 0.02                          | 0.79                                      | 0.23                               | 419                 | 0                  | 1.6                          | 4                    | 19                                 | 60            | 6                        | 17                       | 100                          | 584                      | Yes                                | 5  | 100                          | Yes*                             |      |       |       |      |      |
| 7                             | Port Macquarie-Hastings  | 11,400  | 573,000                  | 348,000                       | 10,572                                     | 9,880               |  | 3,028                           | 124                      | 1.0                       | 0.0                      | 3.3              | 1,675          | 207                      | 0.3      | 55                                | 42 | 3  | 0  | 0 | 0.16                          | 0.00                          | 1.00                                      | 0.94                               | 398                 | -8                 | 1.2                          | 3                    | 14                                 | 40            | 6                        | 20                       | 100                          | 568                      | Yes                                | 6  | 90                           | Yes*                             |      |       |       |      |      |
| 8                             | Riverina                 | 6,810   | 358,000                  | 203,000                       | 6,711                                      | 11,870              | 64,379   | 2,167                           | 61                       | 1.7                       | 1.3                      | 3.0              | 5,726          | 345                      | 1.6      | 13                                | 35 | 33 | 18 | 1 | 0.00                          | 0.34                          | 0.50                                      | 1.77                               | 271                 | -9                 | 7.5                          | 7                    | 57                                 | 90            | 3                        | 2                        | 100                          | 574                      | Yes                                | 4  | 90                           | Yes                              |      |       |       |      |      |
| 10                            | Coffs Harbour            | 11,400  | 423,000                  | 286,000                       | 6,607                                      | 1,330               | 0  | 2,423                           | 272                      | 0.3                       | 0.1                      | 5.8              | 76             | 12                       | 0.0      | 56                                | 34 | 8  | 2  | 0 | 0.01                          | 0.00                          | 1.00                                      | 0.20                               | 395                 | 13                 | 2.0                          | 3                    | 11                                 | 50            | 0                        | 0                        | 100                          | 582                      | Yes                                | 3  | 100                          | Yes+                             |      |       |       |      |      |
| 11                            | Albury City              | 8,060   | 398,000                  | 207,000                       | 5,768                                      | 2,270               | 7,770  | 1,282                           | 40                       | 1.0                       | 0.0                      | 2.7              | 0              |                          |          | 50                                | 25 | 20 | 5  | 0 | 0.25                          | 0.04                          | 1.10                                      | 0.15                               | 277                 | -6                 | 1.9                          | 5                    |                                    | 50            | 3                        | 1                        | 100                          | 354                      | Yes                                | 3  | 100                          | Yes*                             |      |       |       |      |      |
| 13                            | Tamworth Regional        | 9,690   | 365,000                  | 210,000                       | 4,212                                      | 6,610               | 9,159  | 2,284                           | 175                      | 0.6                       | 0.1                      | 5.8              | 1,914          | 299                      | 0.5      | 49                                | 37 | 14 | 0  | 0 | 0.46                          | 0.04                          | 0.82                                      | 1.51                               | 518                 | -4                 | 2.0                          | 14                   |                                    | 70            | 0                        | 43                       | 100                          | 515                      | Yes                                | 12   | 90                           | Yes*                             |      |       |       |      |      |
| 14                            | Clarence Valley          | 18,600  | 456,000                  | 400,000                       | 5,352                                      | 1,920               | 2,941  | 2,376                           | 154                      | 0.3                       | 0.0                      | 8.3              | 883            | 79                       | 0.2      | 50                                | 46 | 4  | 0  | 0 | 0.19                          | 0.01                          | 1.10                                      | 0.16                               | 388                 | 11                 | 0.4                          | 11                   |                                    | 110           | 14                       | 68                       | 100                          | 413                      | Yes                                | 2  | 90                           | Yes+                             |      |       |       |      |      |
| 15                            | Eurobodalla              | 14,200  | 418,000                  | 278,000                       | 6,077                                      | 2,570               | 2,190  | 1,199                           | 106                      | 0.5                       | -                        | 11.1             | 2,151          | 243                      | 0.5      | 7                                 | 47 | 41 | 4  | 0 | 0.29                          | 0.01                          | 1.00                                      | 0.42                               | 405                 | -1                 | 1.1                          | 13                   | 120                                | 50            | 1                        | 0                        | 100                          | 668                      | Yes                                | 5  | 100                          | Yes+                             |      |       |       |      |      |
| 16                            | Wingecarribee            | 8,820   | 284,000                  | 169,000                       | 3,643                                      | 2,810               | 3,434  | 5,002                           | 193                      | 0.5                       | 0.2                      | 11.4             | 1,026          | 155                      | 0.4      | 74                                | 15 | 11 | 0  | 0 | 0.29                          | 0.02                          | 1.13                                      | 0.63                               | 371                 | -4                 | 1.5                          | 5                    | 14                                 | 60            | 8                        | 55                       | 100                          | 463                      | Yes                                | 3  | 90                           | Yes*                             |      |       |       |      |      |
| 17                            | Queanbeyan               | 5,460   | 163,000                  | 95,000                        | 2,250                                      | 910                 | 400  | 343                             | 272                      | 0.3                       | 0.2                      | 4.6              | 269            | 90                       | 0.2      | 34                                | 38 | 28 | 0  | 0 | 0.12                          | 0.00                          | 0.32                                      | 0.40                               | 577                 | -20                | 0.4                          | 6                    | 1                                  | 80            | 0                        | 19                       | 100                          | 871                      | Yes                                |  | 90                           | Yes*                             |      |       |       |      |      |
| 18                            | Dubbo                    | 9,650   | 223,000                  | 170,000                       | 3,519                                      | 2,160               | 3,008  | 1,698                           | 216                      | 0.2                       | -                        | 2.7              | 1,635          | 322                      | 0.7      | 65                                | 26 | 8  | 1  | 0 | 0.39                          | 0.02                          | 1.10                                      | 0.61                               | 482                 | -3                 | 5.0                          | 5                    | 20                                 | 120           | 1                        | 3                        | 100                          | 848                      | Yes                                | 3  | 100                          | Yes+                             |      |       |       |      |      |
| 19                            | Orange                   | 12,500  | 333,000                  | 220,000                       | 2,844                                      | 18,490              | 3,803  | 594                             | 73                       | 0.2                       | 0.2                      | 6.3              | 2,536          | 400                      | 0.8      | 27                                | 42 | 26 | 4  | 1 | 0.06                          | 0.02                          | 0.78                                      | 6.50                               | 339                 | -12                | 4.0                          | 7                    | 51                                 | 60            | 1                        | 62                       | 100                          | 564                      | Yes                                | 3  | 100                          | Yes*                             |      |       |       |      |      |
| 20                            | Goulburn Mulwaree        | 18,900  | 300,000                  | 211,000                       | 3,696                                      | 6,170               | 4,350  | 966                             | 412                      | 0.4                       | 0.2                      | 12.3             | 2,440          | 865                      | 0.8      | 20                                | 39 | 27 | 12 | 2 | 0.68                          | 0.02                          | 0.90                                      | 1.67                               | 426                 | -6                 | 0.8                          | 10                   | 3                                  | 70            | 5                        | 36                       | 100                          | 624                      | Yes                                | 4  | 90                           | Yes                              |      |       |       |      |      |
| 21                            | Bathurst Regional        | 10,400  | 295,000                  | 163,000                       | 3,753                                      | 7,430               | 18,458   | 1,608                           | 320                      | 0.3                       | 0.2                      | 2.4              | 1,132          | 287                      | 0.4      | 24                                | 14 | 42 | 11 | 9 | 0.37                          | 0.11                          | 0.39                                      | 1.98                               | 545                 | -12                | 1.6                          | 7                    | 2                                  | 80            | 34                       | 28                       | 100                          | 522                      | Yes                                | 4  | 100                          | Yes+                             |      |       |       |      |      |
| 22                            | Lismore                  | 5,250   | 128,000                  | 75,000                        | 1,835                                      | 1,250               | 14,569   | 1,520                           |                          | 0.6                       | 0.6                      | 5.9              | 1,192          | 348                      | 0.9      | 40                                | 46 | 13 | 2  | 0 | 0.58                          | 0.20                          | 0.89                                      | 0.91                               | 493                 | -2                 | 1.6                          | 20                   | 49                                 | 40            | 0                        | 2                        | 100                          | 666                      | Yes                                | 3  | 100                          | Yes+                             |      |       |       |      |      |
| 23                            | Bega Valley              | 13,300  | 308,000                  | 191,000                       | 3,711                                      | 4,080               | 5,155  | 1,469                           | 165                      | 0.5                       | 1.0                      | 20.4             | 2,022          | 329                      | 0.7      | 55                                | 23 | 19 | 3  | 1 | 0.00                          | 0.03                          | 19.33                                     | 1.10                               | 543                 | -3                 | -0.8                         | 6                    | 3                                  | 50            | 13                       | 2                        | 100                          | 541                      | Yes                                | 16   | 90                           | Yes*                             |      |       |       |      |      |
| 24                            | Ballina                  | 4,790   | 112,000                  | 69,000                        | 1,479                                      | 3,080               | 1,796  | 918                             | 134                      |                           | -                        | 3.9              | 532            | 160                      | 0.5      | 41                                | 51 | 5  | 2  | 1 | 0.37                          | 0.03                          | 1.00                                      | 2.07                               | 494                 | 17                 | 1.2                          | 5                    | 0                                  | 160           | 0                        | 0                        | 100                          | 555                      | Yes                                | 2  | 90                           | Yes+                             |      |       |       |      |      |
| 25                            | Kempsey                  | 15,300  | 267,000                  | 192,000                       | 4,177                                      | 5,360               | 15,986   | 1,580                           | 201                      | 0.4                       | 0.9                      | 4.5              | 2,293          | 467                      | 0.9      | 57                                | 27 | 10 | 3  | 3 | 0.60                          | 0.08                          | 1.00                                      | 1.28                               | 477                 | 8                  | 1.3                          | 7                    | 124                                | 100           | 0                        | 0                        | 100                          | 580                      | Yes                                | 7  | 90                           | Yes+                             |      |       |       |      |      |
| 27                            | Byron                    | 4,970   | 92,000                   | 56,000                        | 1,206                                      | 350                 | 0  | 691                             | 15                       |                           |                          |                  |                |                          |          |                                   |    |    |    |   |                               |                               |   |                                    |                     |                    |                              |                      |                                    |               |                          |                          |                              |                          |                                    |  |                              |                                  |      |       |       |      |      |



Table 5C: Water Supply - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY  |                    | WATER SUPPLY INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |       |     |                                   |    |    |                               |                               |   |                                    |                         | SYSTEM PERFORMANCE        |                |                      |                              |                   |                                     |                      |                          |                          |                              | BPM                      |                                    |  |                              |      |  |
|--|--------------------|---|--------------------------|-------------------------------|--|---------------------|--|----------------------------------|---------------------------|------------------|--------|--------------------------|----------------|-------|-----|-----------------------------------|----|----|-------------------------------|-------------------------------|---|------------------------------------|-------------------------|---------------------------|----------------|----------------------|------------------------------|-------------------|-------------------------------------|----------------------|--------------------------|--------------------------|------------------------------|--------------------------|------------------------------------|--|------------------------------|------|--|
|  |                    | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint- enance Cost | Mains Maint- enance Cost  | Rehabilitations  |        |                          | Asset Renewals |       |     | Assets in Condition as a % of WDV |    |    |                               |                               | Renewals Ratio                            | Backlog Ratio                      | Asset Maintenance Ratio | Capital Expenditure Ratio | Operating Cost | Net Debt to Equity   | Economic Real Rate of Return | Water Main Breaks | Unplanned Inter- ruptions to Supply | Real Loss            | Water Quality Complaints | Water Service Complaints | % Popn with micro Compliance | Typical Residential Bill | Drinking Water Mgmt System (DWMS)? | No. Water Treatment Operators Meeting Nat'l Cert'n Rqmts | Best-Practice Implementation |      |  |
|  |                    |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |       |     |                                   |    |    |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
|  |                    |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |       |     |                                   |    |    |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
| \$/property F9/C4  | \$'000             | \$'000 F9   | \$'000                   | \$'000 F14                    | \$'000                                     | \$'000              | \$'000 per 100km of Main                               | Mains (% of Total Length)        | Service Conn- ections (%) | Water Meters (%) | \$'000 | \$'000 per 100km of Main | % of CRC       | 1     | 2   | 3                                 | 4  | 5  | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F11     | WS & SGE % F22            | WS % F17       | Per 100km of main A8 | per 1000 properties C17      | L/d/co nn A10     | No. / 1000 props C9                 | No. / 1000 props C10 | % of population H3       | \$/ assessment P3        | Yes/No                       | No.                      | Overall %                          | Strategic Business Plan (Yes/No)                         |                              |      |  |
| (42)   | (43)               | (44)  | (45)                     | (46)                          | (47)                                       | (48)                | (49)   | (50)                             | (51)                      | (52)             | (53)   | (54)                     | (55)           |       |     |                                   |    |    | (57)                          | (58)                          | (59)                                      | (60)                               | (61)                    | (62)                      | (63)           | (64)                 | (65)                         | (66)              | (67)                                | (68)                 | (69)                     | (70)                     | (70a)                        | (70b)                    | (71)                               | (72)   |                              |      |  |
| 40   | Central Tablelands | 9,630   | 121,000                  | 52,900                        | 1,722                                      | 846                 | 20,750   | 987                              | 80                        | 0.9              | 5.6    | 1.5                      | 445            | 79    | 0.4 | 0                                 | 28 | 72 | 0                             | 0                             | 0.44                                      | 0.39                               | 1.00                    | 0.48                      | 626            | -6                   | 0.1                          | 8                 | 41                                  | 60                   | 5                        | 15                       | 100                          | 620                      | Yes                                | 2  | 90                           | Yes  |  |
| 41   | Muswellbrook       | 8,550   | 86,000                   | 49,600                        | 1,458                                      | 2,356               | 2,593  | 1,012                            | 105                       |                  | 0.4    | 4.3                      | 1,023          | 620   | 1.2 | 10                                | 64 | 13 | 13                            | 0                             | 0.80                                      | 0.05                               | 0.87                    | 1.62                      | 626            | -21                  | -0.5                         | 38                | 2                                   | 60                   | 18                       | 2                        | 100                          | 547                      | Yes                                | 6  | 90                           | Yes+ |  |
| 42   | Corowa             | 7,130   | 58,000                   | 38,900                        | 1,163                                      | 1,383               | 4,344  | 641                              | 225                       | 2.3              | 0.1    | 1.8                      | 476            | 269   | 0.8 | 41                                | 43 | 14 | 1                             | 0                             | 0.54                                      | 0.11                               | 1.11                    | 1.19                      | 469            | -11                  | 3.6                          | 12                | 46                                  | 120                  | 3                        | 2                        | 100                          | 560                      | Yes                                | 5  | 90                           | Yes+ |  |
| 43   | Tumut              | 8,900   | 62,000                   | 40,100                        | 1,133                                      | 283                 | 0  | 457                              | 93                        |                  | -      | 10.0                     | 57             | 31    | 0.1 | 97                                | 2  | 1  | 0                             | 0                             | 0.14                                      | 0.00                               | 1.00                    | 0.25                      | 467            | -1                   | 0.4                          | 3                 |                                     | 70                   | 3                        | 4                        | 99                           | 503                      | Yes                                | 6  | 100                          | Yes  |  |
| 44   | Gunnedah           | 9,160   | 66,000                   | 39,800                        | 921  | 1,194               | 612  | 783                              | 358                       | 1.1              | 1.7    | 9.3                      | 236            | 129   | 0.4 | 28                                | 31 | 20 | 21                            | 1                             | 0.77                                      | 0.02                               | 0.96                    | 0.82                      | 475            | -22                  | 3.3                          | 8                 | 3                                   | 80                   | 1                        | 33                       | 99                           | 628                      | Yes                                | 2  | 100                          | Yes  |  |
| 45   | Upper Hunter       | 11,500  | 76,000                   | 50,500                        | 966  | 3,043               | 1,050  | 621                              | 255                       | 1.7              | 2.7    | 31.9                     | 2,243          | 1,282 | 2.9 | 39                                | 27 | 26 | 7                             | 0                             | 1.31                                      | 0.02                               | 1.09                    | 3.15                      | 659            | -12                  | 5.1                          | 30                | 27                                  | 240                  | 1                        | 27                       | 100                          | 798                      | Yes                                | 5  | 100                          | Yes  |  |
| 46   | Narrabri           | 5,570   | 56,000                   | 24,400                        | 894  | 1,145               | 0  | 328                              | 38                        | 2.6              | 0.5    | -                        | 54             | 36    | 0.1 | 23                                | 29 | 44 | 4                             | 0                             | 0.00                                      | 0.00                               | 1.18                    | 1.28                      | 480            | -24                  | 2.6                          | 35                | 3                                   | 200                  | 11                       | 18                       | 100                          | 591                      | Yes                                | 4  | 80                           | Yes* |  |
| 47   | Bellingen          | 10,700  | 58,000                   | 43,800                        | 727  | 530                 | 200  | 141                              | 56                        | 1.2              | 0.5    | 5.3                      | 458            | 274   | 0.8 | 8                                 | 77 | 14 | 2                             | 0                             | 0.76                                      | 0.00                               | 1.00                    | 0.73                      | 391            | -18                  | -0.3                         | 7                 | 2                                   | 70                   | 2                        | 16                       | 100                          | 343                      | Yes                                | 1  | 100                          | Yes  |  |
| 48   | Leeton             | 8,570   | 72,000                   | 35,000                        | 1,140                                      | 1,037               | 4,410  | 1,288                            | 360                       | 0.5              | 2.5    | 3.7                      | 895            | 466   | 1.2 | 17                                | 48 | 27 | 5                             | 3                             | 0.79                                      | 0.13                               | 1.11                    | 0.91                      | 590            | -19                  | 0.4                          | 10                | 15                                  | 150                  | 0                        | 0                        | 100                          | 675                      | Yes                                | 4  | 90                           | Yes* |  |
| 49   | Young              | 3,370   | 50,000                   | 16,500                        | 696  | 194                 | 370  | 412                              | 187                       | 2.0              | 1.0    | 9.2                      | 194            | 129   | 0.4 | 11                                | 9  | 41 | 39                            | 0                             | 0.28                                      | 0.02                               | 1.00                    | 0.28                      | 254            | 3                    | -0.7                         | 31                | 41                                  | 60                   | 2                        | 3                        | 100                          | 659                      | Yes                                |  | 90                           | Yes  |  |
| 50   | Cooma-Monaro       | 11,100  | 82,000                   | 40,600                        | 989  | 1,964               | 4,500  | 941                              | 10                        | 0.7              | 1.2    | 4.6                      | 271            | 202   | 0.3 | 30                                | 24 | 21 | 25                            | 1                             | 0.27                                      | 0.11                               | 0.97                    | 1.99                      | 540            | -10                  | 0.8                          | 7                 | 3                                   | 60                   | 2                        | 15                       | 100                          | 872                      | Yes                                | 2  | 100                          | Yes  |  |
| 51   | Forbes             | 8,980   | 73,000                   | 33,400                        | 1,013                                      | 622                 | 85   | 1,643                            | 438                       | -                | 0.5    | 1.0                      | 0              |       |     | 0                                 | 5  | 86 | 6                             | 3                             | 0.37                                      | 0.00                               | 2.63                    | 0.61                      | 671            | -16                  | -1.6                         | 20                | 115                                 | 90                   | 2                        | 53                       | 100                          | 523                      | Yes                                | 3  | 100                          | Yes* |  |
| 52   | Snowy River        | 4,600   | 50,000                   | 24,400                        | 1,070                                      | 1,052               | 6,129  | 387                              | 186                       |                  | 0.7    | 0.9                      | 732            | 572   | 1.5 | 24                                | 20 | 39 | 16                            | 0                             | 0.65                                      | 0.25                               | 0.55                    | 0.98                      | 311            | -8                   | 1.0                          | 22                | 25                                  | 70                   | 2                        | 24                       | 100                          | 534                      | Yes                                | 7  | 90                           | Yes  |  |
| 53   | Berrigan           | 7,560   | 43,000                   | 26,700                        | 602  | 146                 | 0  | 890                              |                           | 0.5              | 0.8    | 1.7                      | 146            | 70    | 0.3 | 54                                | 46 | 0  | 0                             | 0                             | 0.51                                      | 0.00                               | 0.97                    | 0.24                      | 467            | -19                  | 3.2                          | 17                | 21                                  | 100                  | 7                        | 10                       | 100                          | 775                      | Yes                                | 4  | 70                           | Yes* |  |
| 54   | Deniliquin         | 10,800  | 53,000                   | 37,800                        | 594  | 113                 | 498  | 721                              |                           | 0.7              | -      | 0.6                      | 113            | 76    | 0.2 | 2                                 | 25 | 56 | 15                            | 1                             | 0.19                                      | 0.01                               | 1.14                    | 0.18                      | 528            | -8                   | 0.4                          | 69                | 25                                  | 110                  | 1                        | 3                        | 100                          | 699                      | Yes                                | 2  | 100                          | Yes  |  |
| 55   | Warrumbungle       | 8,430   | 62,000                   | 27,900                        | 853  | 543                 | 9,383  | 620                              | 232                       | 0.7              | 1.0    | 1.0                      | 525            | 355   | 0.9 | 6                                 | 55 | 34 | 5                             | 0                             | 0.23                                      | 0.34                               | 1.05                    | 0.64                      | 673            | -8                   | -1.2                         | 13                | 1                                   | 210                  | 2                        | 12                       | 100                          | 715                      | Yes                                | 11   | 80                           | Yes  |  |
| 56   | Yass Valley        | 12,900  | 60,000                   | 41,900                        | 723  | 0                   | 0  | 377                              | 25                        |                  | 0.5    | 3.7                      | 0              |       |     | 80                                | 15 | 5  | 0                             | 0                             | 0.00                                      | 0.00                               | 0.98                    | 0.00                      | 439            | 18                   | 3.8                          | 8                 | 54                                  | 90                   | 2                        | 20                       | 100                          | 902                      | Yes                                | 3  | 100                          | Yes+ |  |
| Medians (% of LWUs basis) or totals for 3,001 - 10,000 Props |                    | 9,395   |                          |                               |  |                     |  |                                  | 127                       | 0.7              | 0.6    | 3.7                      | 169            | 0.4   |     | 24                                | 31 | 27 | 7                             | 0                             | 0.41                                      | 0.02                               | 1.00                    | 0.70                      | 531            | -8                   | 0.9                          | 14                | 22                                  | 85                   | 2                        | 15                       | 100                          | 638                      |                                    |  |                              |      |  |
| LWUs with 1,501 - 3,000 Properties                           |                    |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |       |     |                                   |    |    |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
| 57   | Wellington         | 6,880   | 36,100                   | 20,000                        | 537  | 93                  | 972  | 554                              | 220                       |                  | 0.4    | 3.2                      | 93             | 89    | 0.3 | 10                                | 38 | 42 | 9                             | 1                             | 0.18                                      | 0.05                               | 0.79                    | 0.17                      | 522            | 6                    | 5.7                          | 5                 | 14                                  | 90                   | 0                        | 30                       | 91                           | 785                      | Yes                                | 2  | 100                          | Yes* |  |
| 58   | Cootamundra        | 1,380   | 15,500                   | 4,200                         | 217  | 72                  | 725  | 288                              | 207                       |                  | 1.4    | 9.5                      | 0              |       |     | 0                                 | 0  | 92 | 8                             | 0                             | 0.33                                      | 0.18                               | 1.03                    | 0.33                      | 287            | -16                  | -1.6                         | 91                | 15                                  | 70                   | 0                        | 55                       | 100                          | 662                      | Yes                                |  | 80                           | Yes* |  |
| 59   | Lachlan            | 19,300  | 102,700                  | 54,700                        | 1,510                                      | 2,592               | 102,861  | 1,040                            | 139                       | -                | -      | -                        | 2,592          | 1,112 | 2.5 | 36                                | 15 | 30 | 17                            | 1                             | 0.11                                      | 1.92                               | 0.20                    | 1.72                      | 798            | -14                  | -1.0                         |                   |                                     | 140                  | 0                        | -                        | 100                          | 1,427                    | Yes                                | 4  | 100                          | Yes* |  |
| 60   | Glen Innes Severn  | 6,740   | 37,400                   | 20,600                        | 449  | 1,467               | 2,242  | 136                              | 126                       | 0.9              | 1.8    | 5.7                      | 489            | 453   | 1.3 | 53                                | 36 | 10 | 1                             | 0                             | 0.00                                      | 0.11                               | 0.74                    | 3.27                      | 390            | 6                    | 1.2                          | 2                 | 13                                  | 30                   | 0                        | 0                        | 100                          | 539                      | Yes                                | 3  | 100                          | Yes* |  |
| 61   | Liverpool Plains   | 14,800  | 55,900                   | 40,900                        | 829  | 782                 | 1,004  | 802                              | 92                        | -                | 1.6    | 2.4                      | 328            | 248   | 0.6 | 11                                | 13 | 73 | 3                             | 0                             | 0.41                                      | 0.02                               | 0.54                    | 0.00                      | 587            | -8                   | 0.5                          | 23                | 46                                  | 100                  | 2                        | 75                       | 100                          | 812                      | Yes                                | 4  | 80                           |      |  |
| 62   | Narromine          | 3,490   | 17,200                   | 7,400                         | 100  | 291                 | 300  | 283                              | 218                       | 1.4              | 3.4    | 6.3                      | 265            | 368   | 1.5 | 5                                 | 20 | 60 | 15                            | 0                             | 2.19                                      | 0.05                               | 0.94                    | 1.96                      | 603            | -29                  | 2.8                          | 19                |                                     | 160                  | 0                        | 0                        | 100                          | 690                      | Yes                                | 3  | 100                          | Yes  |  |
| 63   | Narrandera         | 5,250   | 22,200                   | 11,000                        | 159  | 824                 | 3,830  | 118                              | 413                       | -                | 0.5    | 95.7                     | 536            | 609   | 2   |                                   |    |    |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |

Table 5C: Water Supply - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY   |                 | WATER SUPPLY INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |                |     |                                   |    |     |                               |                               |   |                                    |                         | SYSTEM PERFORMANCE        |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    | BPM  |                              |      |  |
|---|-----------------|---|--------------------------|-------------------------------|--|---------------------|--|----------------------------------|---------------------------|------------------|--------|--------------------------|----------------|----------------|-----|-----------------------------------|----|-----|-------------------------------|-------------------------------|---|------------------------------------|-------------------------|---------------------------|----------------|----------------------|------------------------------|-------------------|-------------------------------------|----------------------|--------------------------|--------------------------|------------------------------|--------------------------|------------------------------------|--|------------------------------|------|--|
|   |                 | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint- enance Cost | Mains Maint- enance Cost  | Rehabilitations  |        |                          | Asset Renewals |                |     | Assets in Condition as a % of WDV |    |     |                               |                               | Renewals Ratio                            | Backlog Ratio                      | Asset Maintenance Ratio | Capital Expenditure Ratio | Operating Cost | Net Debt to Equity   | Economic Real Rate of Return | Water Main Breaks | Unplanned Inter- ruptions to Supply | Real Loss            | Water Quality Complaints | Water Service Complaints | % Popn with micro Compliance | Typical Residential Bill | Drinking Water Mgmt System (DWMS)? | No. Water Treatment Operators Meeting Nat'l Cert'n Rqmts | Best-Practice Implementation |      |  |
|   |                 |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |                |     |                                   |    |     |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
|   |                 |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |                |     |                                   |    |     |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
| \$/property F9/C4   | \$'000          | \$'000 F9   | \$'000                   | \$'000 F14                    | \$'000                                     | \$'000              | \$'000 per 100km of Main                               | Mains (% of Total Length)        | Service Conn- ections (%) | Water Meters (%) | \$'000 | \$'000 per 100km of Main | % of CRC       | WS Assets (56) |     |                                   |    |     | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F11     | WS & SGE % F22            | WS % F17       | Per 100km of main A8 | per 1000 properties C17      | L/d/co nn A10     | No. / 1000 props C9                 | No. / 1000 props C10 | % of population H3       | \$/ assessment P3        | Yes/No                       | No.                      | Overall %                          | Strategic Business Plan (Yes/No)                         |                              |      |  |
| (42)  | (43)            | (44)  | (45)                     | (46)                          | (47)                                       | (48)                | (49)   | (50)                             | (51)                      | (52)             | (53)   | (54)                     | (55)           | 1              | 2   | 3                                 | 4  | 5   | (57)                          | (58)                          | (59)                                      | (60)                               | (61)                    | (62)                      | (63)           | (64)                 | (65)                         | (66)              | (67)                                | (68)                 | (69)                     | (70)                     | (70a)                        | (70b)                    | (71)                               | (72)   |                              |      |  |
| LWUs with 200 - 1,500 Properties                          |                 |   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |                |     |                                   |    |     |                               |                               |   |                                    |                         |                           |                |                      |                              |                   |                                     |                      |                          |                          |                              |                          |                                    |  |                              |      |  |
| 81  | Gwydir          | 7,490   | 15,900                   | 11,000                        | 215  | 0                   | 860  | 552                              | 150                       | 1.1              | 0.5    | 2.0                      | 0              |                |     | 77                                | 22 | 1   | 0                             | 0                             | 0.00                                      | 7.81                               | 0.53                    | 0.00                      | 539            | -5                   | 3.0                          | 18                | 3                                   | 80                   | 6                        | 0                        | 100                          | 790                      | Yes                                | 5  | 90                           | Yes+ |  |
| 83  | Oberon          | 6,030   | 12,200                   | 7,800                         | 171  | 149                 | 191  | 35                               | 87                        | 2.6              | 0.8    | 2.1                      | 149            | 382            | 1.2 | 69                                | 22 | 8   | 0                             | 0                             | 0.89                                      | 0.03                               | 0.54                    | 0.87                      | 837            | -7                   | 2.2                          | 5                 | 1                                   | 100                  | 0                        | 4                        | 100                          | 606                      | Yes                                | 3  | 80                           | Yes  |  |
| 84  | Gilgandra       | 8,010   | 17,200                   | 10,800                        | 294  | 277                 | 284  | 284                              | 161                       |                  | 2.8    | 0.9                      | 264            | 489            | 1.5 | 6                                 | 72 | 20  | 0                             | 3                             | 0.97                                      | 0.03                               | 1.01                    | 0.94                      | 424            | -12                  | 0.4                          | 20                | 8                                   | 140                  | 4                        | 33                       | 100                          | 730                      | Yes                                | 4  | 90                           | Yes* |  |
| 85  | Uralla          | 9,970   | 16,100                   | 14,500                        | 215  | 30                  | 0  | 322                              | 119                       |                  | 0.3    | 0.2                      | 29             | 47             | 0.2 | 8                                 | 91 | 0   | 0                             | 0                             | 0.16                                      | 0.00                               | 1.20                    | 0.14                      | 385            | -11                  | 0.8                          | 10                | 38                                  | 20                   | 1                        | 6                        | 100                          | 684                      | Yes                                | 4  | 70                           |      |  |
| 86  | Hay             | 8,040   | 23,800                   | 10,700                        | 304  | 57                  | 0  | 324                              | 228                       |                  | 0.2    | 0.4                      | 57             | 121            | 0.2 | 0                                 | 66 | 22  | 12                            | 0                             | 0.19                                      | 0.00                               | 1.25                    | 0.19                      | 595            | -17                  | 0.8                          | 43                | 8                                   | 50                   | 0                        | 10                       | 100                          | 921                      | Yes                                | 3  | 80                           | Yes* |  |
| 87  | Bourke          | 7,250   | 23,000                   | 10,000                        | 388  | 0                   | 8,000  | 497                              | 383                       | 2.4              | -      | 8.3                      | 0              |                |     | 16                                | 12 | 63  | 8                             | 1                             | 0.00                                      | 0.80                               | 1.00                    | 0.00                      | 1017           | -13                  | 1.5                          | 159               | 684                                 | 80                   | 0                        | 33                       | 100                          | 1,200                    | Yes                                | 1  | 100                          | Yes  |  |
| 88  | Wakool          | 15,500  | 32,400                   | 22,500                        | 483  | 375                 | 12   | 174                              | 64                        | 0.6              | -      | -                        | 375            | 226            | 1.2 | 6                                 | 48 | 34  | 12                            | 0                             | 0.61                                      | 0.00                               | 1.01                    | 0.78                      | 701            | -9                   | 0.2                          | 6                 | 6                                   | 50                   | 1                        | 9                        | 100                          | 905                      | Yes                                | 4  | 80                           | Yes  |  |
| 89  | Bogan           | 11,600  | 32,400                   | 13,800                        | 427  | 0                   | 636  | 526                              | 222                       |                  | 0.8    | 7.9                      | 0              |                |     | 10                                | 44 | 13  | 33                            | 0                             | 0.28                                      | 0.05                               | 1.09                    | 0.00                      | 1586           | -15                  | -0.6                         | 48                | 24                                  | 200                  | 0                        | 105                      | 100                          | 1,113                    | Yes                                | 2  | 100                          | Yes  |  |
| 90  | Guyra           | 16,400  | 25,400                   | 20,700                        | 394  | 49                  | 2,420  | 175                              |                           | -                | 0.2    | 3.5                      | 49             | 82             | 0.2 | 0                                 | 33 | 66  | 1                             | 0                             | 0.19                                      | 0.12                               | 0.85                    | 0.12                      | 775            | -7                   | -1.2                         | 7                 | 44                                  | 70                   | 11                       | 10                       | 100                          | 566                      | Yes                                | 4  | 80                           | Yes* |  |
| 91  | Cabonne         | 21,000  | 45,500                   | 24,600                        | 484  | 455                 | 867  | 419                              | 10                        | 1.9              | 0.7    | 0.7                      | 8              | 15             | 0.0 | 17                                | 33 | 50  | 0                             | 0                             | 0.75                                      | 0.04                               | 0.79                    | 0.94                      | 521            | -4                   | -0.8                         | 23                | 5                                   | 70                   | 0                        | 1                        | 100                          | 546                      | Yes                                | 2  | 100                          | Yes* |  |
| 92  | Carrathool      | 12,400  | 21,600                   | 15,000                        | 299  | 221                 | 412  | 440                              | 61                        |                  | -      | 6.2                      | 221            | 46             | 1.0 | 8                                 | 12 | 78  | 2                             | 0                             | 0.76                                      | 0.03                               | 0.94                    | 0.74                      | 993            | 2                    | 3.2                          | 20                |                                     | 100                  | 1                        | 7                        | 100                          | 615                      | Yes                                | 5  | 70                           |      |  |
| 93  | Tumbarumba      | 17,100  | 32,600                   | 20,000                        | 429  | 691                 | 2,212  | 187                              | 108                       |                  | 0.4    | 2.6                      | 691            | 1,047          | 2.1 | 27                                | 16 | 52  | 5                             | 0                             | 1.61                                      | 0.11                               | 0.76                    | 1.61                      | 500            | -3                   | 0.1                          | 0                 | 9                                   | 80                   | 0                        | 1                        | 100                          | 616                      | Yes                                | 2  | 100                          | Yes* |  |
| 94  | Gundagai        | 9,450   | 18,100                   | 9,400                         | 273  | 27                  | 0  | 95                               | 67                        | -                | -      | -                        | 27             | 75             | 0.1 | 0                                 | 0  | 0   | 0                             | 100                           | 0.10                                      | 0.00                               | 0.73                    | 0.10                      | 664            | -12                  | -0.1                         |                   |                                     | 90                   | 0                        | -                        | 100                          | 703                      | Yes                                | 2  | 90                           | Yes* |  |
| 96  | Warren          | 6,950   | 13,900                   | 6,500                         | 193  | 202                 | 230  | 152                              | 413                       | 3.3              | 1.3    | 6.6                      | 167            | 557            | 1.2 | 57                                | 21 | 18  | 4                             | 0                             | 0.61                                      | 0.04                               | 1.45                    | 1.05                      | 495            | -19                  | 0.3                          | 350               | 21                                  | 100                  | 20                       | 16                       | 100                          | 805                      | Yes                                | 3  | 90                           | Yes  |  |
| 97  | Bombala         | 12,800  | 20,100                   | 11,400                        | 277  | 49                  | 2,600  | 17                               | 177                       | -                | 0.1    | 2.8                      | 49             | 126            | 0.2 | 0                                 | 0  | 100 | 0                             | 0                             | 0.18                                      | 0.23                               | 0.20                    | 0.18                      | 538            | -15                  | -0.8                         | 26                |                                     | 30                   | 14                       | 8                        | 100                          | 763                      | Yes                                | 2  | 50                           |      |  |
| 98  | Walcha          | 17,200  | 17,900                   | 15,800                        | 208  | 80                  | 230  | 171                              | 81                        | -                | 6.6    | 0.3                      | 0              |                |     | 20                                | 36 | 33  | 9                             | 2                             | 0.39                                      | 0.01                               | 1.24                    | 0.38                      | 689            | -7                   | -1.7                         | 7                 | 14                                  | 60                   | 0                        | 3                        | 100                          | 528                      | Yes                                | 4  | 80                           | Yes* |  |
| 100   | Balranald       | 7,950   | 15,700                   | 7,200                         | 276  | 0                   | 0  | 319                              | 257                       |                  | -      | 1.4                      | 0              |                |     | 1                                 | 18 | 80  | 1                             | 0                             | 0.00                                      | 0.00                               | 1.33                    | 0.00                      | 548            | -7                   | 2.1                          | 67                |                                     | 40                   | 6                        | -                        | 100                          | 798                      | Yes                                | 5  | 80                           | Yes* |  |
| 101   | Murrumbidgee    | 8,020   | 8,700                    | 6,300                         | 123  | 47                  | 0  | 83                               | 100                       | -                | -      | 2.3                      | 47             | 147            | 0.5 | 3                                 | 24 | 73  | 0                             | 0                             | 0.38                                      | 0.00                               | 1.15                    | 0.38                      | 363            | -16                  | 0.2                          |                   |                                     | 170                  | 0                        | -                        | 100                          | 422                      | Yes                                | 3  | 60                           | Yes* |  |
| 103   | Central Darling | 34,700  | 44,900                   | 25,700                        | 581  | 0                   | 12,633   | 188                              | 142                       |                  | 0.4    | 0.5                      | 0              |                |     | 0                                 | 24 | 17  | 13                            | 45                            | 0.98                                      | 0.49                               | 0.22                    | 0.00                      | 942            | -2                   | 2.2                          | 39                | 16                                  | 30                   | 50                       | 46                       | 100                          | 1,046                    | Yes                                | 1  | 80                           |      |  |
| 104   | Boorowa         | 15,100  | 21,400                   | 9,800                         | 308  | 131                 | 132  | 208                              | 254                       | 2.1              | 2.5    | 7.4                      | 113            | 235            | 0.5 | 3                                 | 95 | 0   | 2                             | 0                             | 0.39                                      | 0.01                               | 1.01                    | 0.43                      | 634            | -11                  | -0.6                         | 6                 | 55                                  | 30                   | 8                        | 0                        | 100                          | 837                      | Yes                                | 1  | 90                           | Yes  |  |
| 105   | Brewarrina      | 11,400  | 14,700                   | 5,300                         | 286  | 31                  | 219  | 286                              | 316                       | 2.6              | 0.9    | 0.6                      | 9              | 24             | 0.1 | 34                                | 63 | 3   | 0                             | 0                             | 0.00                                      | 0.04                               | 1.28                    | 0.11                      | 1638           | -17                  | -0.2                         | 111               | 4                                   | 110                  | 9                        | 64                       | 100                          | 1,953                    | Yes                                | 5  | 100                          | Yes  |  |
| 106   | Jerilderie      | 7,060   | 8,600                    | 3,500                         | 127  | 106                 |  | 195                              | 140                       |                  | 2.2    | 0.2                      | 9              | 21             | 0.1 | 0                                 | 0  | 99  | 1                             | 0                             | 0.07                                      | 0.00                               | 1.84                    | 0.80                      | 739            | -27                  | -1.8                         | 19                | 16                                  | 40                   | 8                        | 0                        | 100                          | 1,588                    | Yes                                | 2  | 90                           | Yes* |  |
| Medians (% of LWUs basis) or totals for 200 - 1,500 Props |                 | 10,685  |                          |                               |  |                     |  | 142                              |                           | 2.3              | 0.8    | 2.1                      |                | 123            | 0.4 | 7                                 | 24 | 28  | 1                             | 0                             | 0.33                                      | 0.03                               | 1.01                    | 0.29                      | 649            | -11                  | 0.2                          | 20                | 14                                  | 75                   | 1                        | 8                        | 100                          | 777                      |                                    |  |                              |      |  |
| Medians (% of LWUs basis)                                 |                 | 9,640   | Total (\$M)              | Total (\$M)                   | Total (\$M)                                | Total (\$M)         | Total (\$M)  | 140                              | 0.7                       | 0.7              | 3.4    | Total (\$M)              | 228            | 0.5            | 24  | 31                                | 23 | 4   | 0                             | 0.33                          | 0.03                                      | 1.00                               | 0.66                    | 519                       | -7             | 1.1                  | 10                           | 14                | 75                                  | 2                    | 10                       | 100                      | 660                          | Total 94 (100%)          | Total 348                          | Overall 91%  | Total 90 (94%)               |      |  |
| Medians (Statewide basis)                                 |                 | 10,000  | 14,300                   | 8,980                         | 194  | 200                 | 470  | 90                               | 172                       | 0.5              | 0.5    | 3.5                      | 85             | 244            | 0.4 | 36                                | 36 | 17  | 2                             | 0                             | 0.36                                      | 0.02                               | 1.00                    | 0.74                      | 400            | -1                   | 1.6                          | 9                 | 24                                  | 60                   | 3                        | 6                        | 100                          | 566                      |                                    |  |                              |      |  |
| National Medians  |                 | 7,660   |                          |                               |  |                     |  |                                  |                           |                  |        |                          |                |                |     |                                   |    |     |                               |                               |   |                                    |                         | 455                       | 11             | 1.9                  | 13                           | 91                | 76                                  | 2                    | 0                        | 100                      | 589                          |                          |                                    |  |                              |      |  |



Notes

1. Table 5C shows each NSW regional local water utility's [LWU] **water supply infrastructure asset condition** [col 56], **asset rehabilitations** [col 50 to 52], **asset renewal expenditure** [col 53 to 55], **financial performance** [col 42 to 49 and 57 to 63], water supply **system performance** [col 64 to 70b], typical residential bill [TRB - col 70], strategic business planning [SBP - col 72, this includes a 30-year total asset management plan [capital works plan identifying each of works for growth, improved standards and renewals, operation plan, including non-build solutions and maintenance plan] and 30-year financial plan] and its level of implementation of the Best-Practice Management [BPM] of Water Supply and Sewerage requirements [BPM - col 71].
- In addition to showing the results for each LWU, Table 5C shows the Statewide median for each indicator, as well as the **2014-15 National Median** for the National Water Initiative [NWI] performance indicators [col 42, 44, 46 and 61 to 70].
2. The sources of data for Table 5C are:
- col 47, 48, 56 to 60 are from each council's reported Special Schedule 7;

- col 42 to 46 and col 61 to 63 from each council's reported Special Schedules 3 and 4; and

- col 64 to 72 are based on the results reported by each council in the NSW Water Supply and Sewerage Performance Monitoring Database.
- Note that minor errors identified in the reported results for column 56 for Boorowa have been corrected.
3. **Totals for water supply in regional NSW:**
- o **Total current replacement cost of system assets** - \$14.3B [col 43],

o **Total written down replacement cost** - \$9.0B [col 44],

o **Total annual depreciation** - \$193M [col 45],

o **Total** estimated cost to Bring to Satisfactory Standard<sup>1</sup> **(BTS) – \$469M** [col 47],

o **Total annual maintenance expenditure** - \$89M [col 48],

o **Total capital expenditure** - \$200M [col 46],

o **Total asset renewal expenditure** - \$85M [col 53],

o **Drinking water management system [DWMS]** - 94 (100%) [col 70a],

o **No. of water treatment operators meeting national certification requirements** – 348 [col 70b],

o **Strategic Business Plan [SBP]** - 90 (94%) [col 72] and **Overall BPM implementation [WS]** – 91% [col 71].
- The total \$469M for BTS is 2.4 times the annual depreciation of \$193M, 3.3% of the current replacement cost of system assets<sup>2</sup> of \$14.3B and 62% of the 2014-15 annual water supply revenue of \$757M.
4. **Statewide medians for water supply in regional NSW:**
- o **Written down current replacement cost per connected property** - \$10,000 [col 42] ; National Median \$7,660

o **Assets in condition 1** - 36% [col 56]

o **Assets in condition 2** - 36% [col 56]

o **Assets in condition 3** - 17% [col 56]

o **Assets in condition 4** - 2% [col 56]

o **Assets in condition 5** - 0% [col 56]

o **Water main rehabilitations** per 100 km of main – 0.5 km [col 50]

o **Service connection rehabilitations** – 0.5% [col 51]

o **Water meter rehabilitations** - 3.5% [col 52]

o **Asset renewals** per 100 km of main – \$244,000 [col 54]

o **Asset renewals** / current replacement cost of assets – 0.4% [col 55]

o **Renewals Ratio** [Asset Renewals/Depreciation] – 0.36 [col 57]

o **Backlog Ratio** [BTS/ Value of Infrastructure] – 0.02 [col 58]

o **Asset Maintenance Ratio** [Actual Maintenance/Required Maintenance] – 1.00 [col 59]

o **Capital Expenditure Ratio** [Capital expenditure/Depreciation] – 0.74 [col 60]

o **Operating Cost** [OMA cost/connected property – **F11**] - \$400 [col 61]; National Median \$455

o **Water Mains Maintenance cost** per 100 km of main - \$172,000 [col 49]

o **Net Debt to Equity** [WS & SGE – **F22**] – -1% [col 62]; National Median 11%

o **Economic Real Rate of Return** [**F17**] – 1.6% [col 63]; National Median 1.9%

o **Water Main breaks**/100km of main [**A8**] – 9 [col 64]; National Median 13

1 BTS - Estimated cost to bring to a satisfactory standard.

2 This value of 3.3% is consistent with the col 58 value of 0.03 (ie. 3%) for the median LWU. The value of the Statewide median for col 58 is 0.02, which indicates a lower BTS proportion for the larger LWUs.

4. **Statewide medians for water supply in regional NSW:** (continued from left)
- o **Unplanned interruptions to supply** per 1000 properties [**C17**] – 24 [col 65]; National Median 91

o **Real Loss** [leakage/connection/d - **A10**] – 60 [col 66]; National Median 76

o **Water quality complaints**/1000 properties [**C9**] – 3 [col 67]; National Median 2

o **Water service complaints**/1000 properties [**C10**] – 6 [col 68]; National Median 0

o **% of Population with microbiological water quality compliance** [**H3**] – 100% [col 69]; National Median 100%

o **Typical Residential Bill**/assessment [2014-15 – **P3**] - \$566 [col 70]; National Median \$589.
- The totals in note 3 above and the statewide medians in this note 4 provide useful information on the infrastructure asset condition, asset rehabilitations, asset renewal expenditure, financial performance, system performance, the typical residential bill and the extent of asset management and strategic business planning for water supply in regional NSW.
- Disclosure of the 32 indicators shown for each LWU in Table 5C provides transparency and public accountability.
5. **LWU Planning:**
- As indicated on page 8 of the *NSW Water and Sewerage Strategic Business Planning Guidelines* (www.water.nsw.gov.au), the provision of water supply and sewerage services is highly capital intensive. Accordingly, sound planning, analysis and community involvement are essential.
- As noted on pages 3 and 22 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*, each LWU needs to prepare a 30-year Integrated Water Cycle Management (IWCM) Strategy, financial plan and report in accordance with the July 2014 IWCM Check List (www.water.nsw.gov.au). This involves a 30-year total asset management plan (TAMP – refer to note 1 above), which includes a **sound 30-year renewals plan** in accordance with Item 7F of the Strategic Business Planning Check List (www.water.nsw.gov.au). Only 'proven' renewals projects should be included in the first 5 years of a LWU's renewals plan.
6. **Comment on reported Asset Condition [col 56]:**
- Note 4 above shows that the Statewide medians for assets in condition 1, 2, 3, 4 and 5 are 36%, 36%, 17%, 2% and 0% respectively.
- With regard to assets in **condition 5 (very poor)**, **59 LWUs** (62%) had a **0%** result.
- The performance of the following 5 LWUs, which had a result greater than 6% for condition 5 is analysed below using the results in Table 5C:
- o Gundagai 100% - has a **moderate TRB and a high OMA cost**, full cost recovery, has reported no water quality complaints in 2014-15, but reported 8 complaints per 1000 properties in 2013-14. 100% of reticulated population received a water supply which complied with the 2011 Australian Drinking Water Guidelines (ADWG) and has reported 11 water main breaks per 1000 properties in 2013-14, but did not report in 2014-15. Asset renewals expenditure was \$75,000 per 100 km of main, a total of \$27,000 or 0.1% of CRC (the Current Replacement Cost of system assets). Has a strategic business plan over 4 years old and now needs to prepare a 30-year IWCM Strategy and financial plan. Has implemented 90% of the BPM outcomes. Has 2 fully qualified water treatment works operators.

o Central Darling 45% - has a **high TRB and very high OMA cost**, full cost recovery, reported a very high 50 water quality complaints per 1000 properties, 100% of reticulated population received a water supply which complied with ADWG, had a very high level of water main breaks. Has rehabilitated 0.4% of its service connections and 0.5% of its water meters in 2014-15. Does not have a strategic business plan and financial plan and now needs to prepare a 30-year IWCM Strategy and financial plan. Also needs to apply appropriate non-residential water supply charges. Has implemented 80% of the BPM outcomes. Has a fully qualified water treatment works operator and 5 operators undergoing training.

o Cobar 16% - has a **high TRB and a very high OMA cost**, full cost recovery, reported a high level of water quality and service complaints, 100% of reticulated population received a water supply which complied with ADWG, had a high level of water main breaks. Has rehabilitated 0.9 km of mains/100km and 3.6% of its water meters in 2014-15. Has a current strategic business plan and IWCM Strategy. Has implemented 100% of the BPM requirements. Has a fully qualified water treatment works operator and has 1 operator undergoing training.

o Walgett 14% - has a **high TRB and moderate OMA cost**, full cost recovery, reported no water quality complaints in 2014-15, but reported 3 complaints per 1000 properties in 2013-14, 93% of reticulated population received a water supply which complied with ADWG, had a moderate level of water main breaks. Has rehabilitated 0.3% of its water meters in 2014-15. Asset renewals expenditure was \$1,900,000 per 100 km of main, a total of \$1,760,000 or 0.3% of CRC (the Current Replacement Cost of system assets). Does not have a strategic business plan and financial plan and now needs to prepare a 30-year IWCM Strategy and financial plan. Also needs to apply appropriate developer charges. Has implemented 80% of the BPM requirements. Has a fully qualified water treatment works operator and has 4 operators undergoing training.

o Moree Plains 11% - has a **high TRB and OMA cost**, full cost recovery, reported a high level of water service complaints, 100% of reticulated population received a water supply which complied with ADWG, had a very high level of water main breaks. Asset renewals expenditure was \$47,000 per 100 km of main, a total of \$77,000 or 0.1% of CRC. Has rehabilitated 0.6 km per 100 km of mains and 0.9% of its water meters in 2014-15. Has a strategic business plan and an IWCM Evaluation Study. Now needs to prepare an IWCM Strategy and financial plan. Has implemented 100% of the BPM requirements. Has 3 fully qualified water treatment works operators.



Table 5D: Sewerage - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY                                   |                          | SEWERAGE INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |    |    |                               |                               | SYSTEM PERFORMANCE                        |                                    |                     |                    |                              |                       |                      |                   |                             |                                  | BPM              |                          |  |                                   |                              |                                  |  |
|---|--------------------------|---|--------------------------|-------------------------------|--|---------------------|--|-----------------------------|--------------------------|---------------------------|-------------------------|----------------|---------------------------|----------|-----------------------------------|----|----|----|----|-------------------------------|-------------------------------|---|------------------------------------|---------------------|--------------------|------------------------------|-----------------------|----------------------|-------------------|-----------------------------|----------------------------------|------------------|--------------------------|--|-----------------------------------|------------------------------|----------------------------------|--|
|   |                          | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint- enance | Mains Maint- enance Cost | Rehabilitations           |                         | Asset Renewals |                           |          | Assets in Condition as a % of WDV |    |    |    |    | Renewals Ratio                | Backlog Ratio                 | Asset Maintenance Ratio                   | Capital Expenditure Ratio          | Operating Cost      | Net Debt to Equity | Economic Real Rate of Return | Sewer Main Breaks     | Infiltration         | Sewer Overflows   | Sewerage Service Complaints | % Sge Treated that was compliant | Odour Complaints | Typical Residential Bill | Pollution Incident Response Mgmt Plan (PIRMP)? | STW Operators meeting NSW Reqmnts | Best-Practice Implementation |                                  |  |
|   |                          | \$/property F10/C8  | \$'000                   | \$'000 F10                    | \$'000                                     | \$'000 F15          | \$'000   | \$'000                      | \$'000 per 100km of Main | Mains (% of Total Length) | Service Conn- ections % | \$'000         | \$'000 per 100 km of Main | % of CRC | SGE Assets (86)                   |    |    |    |    | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F12 | WS & SGE % F22     | SGE % F18                    | Per 100km of main A14 | ML per 100km of main | Per 100km of main | Per 1000 props C11          | % E4                             | Per 1000 props   | \$/ assessment P6        | Yes/No   | No.                               | Overall %                    | Strategic Business Plan (Yes/No) |  |
|   |                          |   |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          | 1                                 | 2  | 3  | 4  | 5  |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |
| (73)  | (74)                     | (75)  | (76)                     | (77)                          | (78)                                       | (79)                | (80)   |                             | (81)                     | (82)                      | (83)                    | (84)           | (85)                      |          |                                   |    |    |    |    | (87)                          | (88)                          | (89)                                      | (90)                               | (91)                | (92)               | (93)                         | (94)                  | (95)                 | (96)              | (97)                        | (98)                             | (99)             | (100)                    | (100a)   | (100b)                            | (101)                        | (102)                            |  |
|   | Sydney Water Corporation | 17,000  |                          | 31,661,000                    |  | 478,000             |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |    |    |                               |                               |   | 278                                | 98                  | 1                  |                              |                       |                      |                   |                             |                                  | 592              |                          |  |                                   |                              |                                  |  |
|   | Hunter Water Corporation | 20,000  |                          | 4,474,000                     |  | 40,700              |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |    |    |                               |                               |   | 353                                | 81                  | 2                  |                              |                       |                      |                   |                             |                                  | 623              |                          |  |                                   |                              |                                  |  |
| LWUs with > 10,000 Properties                   |                          |   |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |    |    |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |
| 1   | Gosford                  | 22,000  | 2,031,000                | 1,537,000                     | 18,300                                     | 29,300              | 25,900   | 6,156                       | 148                      | 0.4                       | -                       | 28,714         | 2,167                     | 1.4      | 36                                | 51 | 10 | 2  | 0  | 1.12                          | 0.02                          | 0.94                                      | 1.60                               | 379                 | 6                  | 0.3                          | 39                    | 316                  | 44                | 2                           | 100                              | 2                | 612                      | Yes  | 6                                 | 100                          | Yes+                             |  |
| 2   | Wyong                    | 11,500  | 1,058,000                | 712,000                       | 13,200                                     | 11,500              | 7,600  | 6,140                       | 139                      | 0.6                       | -                       | 9,717          | 802                       | 0.9      | 10                                | 68 | 19 | 3  | 0  | 0.75                          | 0.01                          | 0.99                                      | 0.87                               | 336                 | 9                  | 0.2                          | 49                    |                      | 51                | 12                          | 100                              | 1                | 471                      | Yes  | 14                                | 100                          | Yes*                             |  |
| 3   | Shoalhaven               | 11,100  | 700,000                  | 465,000                       | 7,700                                      | 12,400              | 0  | 4,240                       | 26                       | 0.2                       | 0.3                     | 886            | 73                        | 0.1      | 95                                | 5  | 0  | 0  | 0  | 0.22                          | 0.00                          | 0.90                                      | 1.30                               | 500                 | -1                 | 3.9                          | 11                    | 63                   | 20                | 0                           | 94                               | 0                | 750                      | Yes  | 7                                 | 100                          | Yes+                             |  |
| 5   | MidCoast                 | 12,900  | 657,000                  | 453,000                       | 8,700                                      | 3,700               | 26,500   | 4,250                       | 92                       | 0.3                       | -                       | 2,902          | 258                       | 0.4      | 48                                | 37 | 12 | 2  | 1  | 0.28                          | 0.06                          | 0.29                                      | 0.33                               | 543                 | 22                 | 2.6                          | 6                     | 54                   | 6                 | 3                           | 98                               | 1                | 948                      | Yes  | 16                                | 100                          | Yes*                             |  |
| 6   | Tweed                    | 19,600  | 817,000                  | 604,000                       | 10,400                                     | 5,000               | 10,200   | 4,247                       | 205                      | 0.6                       | 0.0                     | 3,225          | 457                       | 0.4      | 76                                | 21 | 4  | 0  | 0  | 0.06                          | 0.02                          | 0.95                                      | 0.30                               | 524                 | 0                  | 1.1                          | 0                     | 191                  | 5                 | 6                           | 100                              | 0                | 732                      | Yes  | 10                                | 100                          | Yes*                             |  |
| 7   | Port Macquarie-Hastings  | 9,400   | 404,000                  | 261,000                       | 7,500                                      | 6,000               |  | 3,887                       | 64                       | 0.1                       | 0.0                     | 2,798          | 406                       | 0.7      | 39                                | 49 | 9  | 2  | 0  | 0.38                          | 0.00                          | 1.00                                      | 0.81                               | 480                 | -8                 | 1.5                          | 16                    | 144                  | 21                | 6                           | 100                              | 2                | 736                      |  | 11                                | 100                          | Yes*                             |  |
| 9   | Wagga Wagga              | 9,400   | 352,000                  | 255,000                       | 5,000                                      | 4,400               | 8,300  | 2,480                       | 99                       | 0.5                       | 0.8                     | 903            | 144                       | 0.3      | 84                                | 3  | 6  | 7  | 1  | 0.13                          | 0.03                          | 0.00                                      | 0.89                               | 418                 | 5                  | 1.3                          | 80                    | 8                    | 27                | 41                          | 100                              | 1                | 434                      | Yes  | 8                                 | 100                          | Yes                              |  |
| 10  | Coffs Harbour            | 19,300  | 659,000                  | 458,000                       | 13,500                                     | 12,600              | 0  | 3,739                       | 189                      | 0.7                       | 0.2                     | 163            | 23                        | 0.0      | 47                                | 27 | 15 | 7  | 4  | 0.01                          | 0.00                          | 1.00                                      | 0.94                               | 619                 | 13                 | 0.1                          | 89                    |                      | 7                 | 0                           | 100                              | 0                | 806                      | Yes  | 5                                 | 100                          | Yes+                             |  |
| 11  | Albury City              | 7,600   | 338,000                  | 183,000                       | 3,900                                      | 1,900               | 12,900   | 2,244                       | 129                      | 0.7                       | 0.0                     | 0              |                           |          | 50                                | 25 | 20 | 5  | 0  | 0.42                          | 0.07                          | 1.03                                      | 0.35                               | 393                 | -6                 | 4.1                          | 65                    |                      | 1                 | 2                           | 63                               | 1                | 639                      | Yes  | 4                                 | 100                          | Yes*                             |  |
| 13  | Tamworth Regional        | 11,900  | 295,000                  | 233,000                       | 5,300                                      | 2,400               | 9,900  | 1,966                       | 151                      | 0.0                       | 0.0                     | 549            | 99                        | 0.2      | 73                                | 17 | 10 | 0  | 0  | 0.10                          | 0.04                          | 0.81                                      | 0.35                               | 425                 | -4                 | 3.2                          | 50                    |                      | 8                 | 16                          | 100                              | 0                | 758                      | Yes  | 11                                | 100                          | Yes*                             |  |
| 15  | Eurobodalla              | 12,800  | 399,000                  | 232,000                       | 6,400                                      | 3,900               | 1,200  | 1,184                       | 50                       | 2.1                       | 0.0                     | 2,531          | 480                       | 0.6      | 13                                | 40 | 47 | 0  | 0  | 0.37                          | 0.01                          | 1.00                                      | 0.62                               | 501                 | -1                 | 1.7                          | 32                    | 270                  | 9                 | 0                           | 100                              | 0                | 865                      | Yes  | 7                                 | 100                          | Yes+                             |  |
| 17  | Queanbeyan               | 6,700   | 241,000                  | 116,000                       | 3,700                                      | 1,900               | 1,500  | 903                         | 78                       | 0.0                       | 0.0                     | 106            | 32                        | 0.0      | 37                                | 43 | 17 | 3  | 1  | 0.03                          | 0.01                          | 0.78                                      | 0.50                               | 377                 | -20                | 1.3                          | 61                    | 90                   | 43                | 12                          | 100                              | 0                | 470                      | Yes  | 3                                 | 100                          | Yes*                             |  |
| 19  | Orange                   | 9,600   | 248,000                  | 159,000                       | 2,900                                      | 3,400               | 300  | 752                         | 96                       | 0.7                       | 0.1                     | 489            | 109                       | 0.2      | 43                                | 26 | 16 | 15 | 0  | 0.34                          | 0.00                          | 0.51                                      | 1.15                               | 409                 | -12                | 2.7                          | 33                    | 67                   | 20                | 41                          | 100                              | 1                | 423                      | Yes  | 4                                 | 100                          | Yes*                             |  |
| 18  | Dubbo                    | 10,900  | 244,000                  | 180,000                       | 4,500                                      | 18,900              | 5,600  | 955                         |                          | 0.5                       | 0.0                     | 1,200          | 293                       | 0.5      | 53                                | 26 | 16 | 4  | 1  | 3.15                          | 0.03                          | 0.80                                      | 4.25                               | 350                 | -3                 | 3.9                          | 46                    | 1                    | 6                 | 12                          | 100                              | 0                | 690                      | Yes  | 4                                 | 100                          | Yes+                             |  |
| 16  | Wingecarribee            | 13,200  | 273,000                  | 207,000                       | 3,600                                      | 3,100               | 5,000  | 5,024                       | 153                      | 0.7                       | 0.0                     | 939            | 168                       | 0.3      | 84                                | 12 | 1  | 1  | 2  | 0.27                          | 0.03                          | 1.13                                      | 0.73                               | 439                 | -4                 | 3.0                          | 22                    | 321                  | 38                | 11                          | 96                               | 2                | 739                      | Yes  | 9                                 | 100                          | Yes*                             |  |
| 14  | Clarence Valley          | 19,100  | 323,000                  | 282,000                       | 4,300                                      | 23,600              | 2,600  | 1,635                       | 107                      | 0.2                       | 0.1                     | 485            | 116                       | 0.2      | 59                                | 32 | 9  | 0  | 0  | 0.12                          | 0.01                          | 0.93                                      | 5.43                               | 462                 | 11                 | 2.5                          | 52                    | 57                   | 23                | 26                          | 92                               | 1                | 988                      | Yes  | 9                                 | 100                          | Yes+                             |  |
| 21  | Bathurst Regional        | 5,700   | 196,000                  | 91,000                        | 2,900                                      | 5,600               | 13,900   | 1,597                       | 235                      | 0.0                       | 0.0                     | 1,546          | 387                       | 0.8      | 20                                | 34 | 39 | 5  | 1  | 0.63                          | 0.15                          | 0.45                                      | 1.95                               | 435                 | -12                | 2.7                          | 99                    | 18                   | 63                | 29                          | 100                              | 0                | 479                      | Yes  | 4                                 | 100                          | Yes+                             |  |
| 24  | Ballina                  | 13,900  | 250,000                  | 196,000                       | 2,300                                      | 5,100               | 1,700  | 2,292                       | 166                      | 0.6                       | 0.0                     | 1,231          | 376                       | 0.5      | 87                                | 11 | 3  | 0  | 0  | 0.55                          | 0.01                          | 1.00                                      | -2.67                              | 647                 | 17                 | 2.7                          | 3                     | 274                  | 2                 | 3                           | 79                               | 2                | 807                      | Yes  | 13                                | 100                          | Yes+                             |  |
| 22  | Lismore                  | 14,900  | 319,000                  | 190,000                       | 4,500                                      | 4,700               | 30,600   | 2,189                       | 221                      | 2.5                       | 2.8                     | 4,335          | 1,208                     | 1.4      | 37                                | 43 | 18 | 2  | 0  | 0.99                          | 0.17                          | 0.92                                      | 1.27                               | 454                 | -2                 | 0.5                          | 50                    | 309                  | 1                 | 2                           | 68                               | 0                | 772                      | Yes  | 4                                 | 89                           | Yes+                             |  |
| 23  | Bega Valley              | 15,000  | 297,000                  | 182,000                       | 6,300                                      | 4,100               | 300  | 1,043                       | 100                      | 1.2                       | 0.3                     | 1,734          | 432                       | 0.6      | 26                                | 26 | 46 | 1  | 1  | 0.00                          | 0.00                          | 12.57                                     | 0.64                               | 740                 | -3                 | 0.7                          | 9                     |                      | 7                 | 1                           | 92                               | 1                | 1,109                    | Yes  | 5                                 | 100                          | Yes*                             |  |
| 27  | Byron                    | 13,800  | 204,000                  | 147,000                       | 3,200                                      | 900                 | 0  | 1,965                       | 127                      | 0.0                       | 0.0                     | 384            | 153                       | 0.2      | 50                                | 26 | 19 | 4  | 0  | 0.12                          | 0.00                          | 1.00                                      | 0.27                               | 680                 | 14                 | 4.0                          | 11                    | 170                  | 6                 | 1                           | 97                               | 1                | 1,093                    | Yes  | 4                                 | 100                          | Yes*                             |  |
| 20  | Goulburn Mulwaree        | 7,700   | 149,000                  | 83,000                        | 2,000                                      | 2,300               | 4,500  | 879                         | 247                      | 0.4                       | 3.0                     | 2,233          | 784                       | 1.5      | 19                                | 25 | 21 | 30 | 4  | 1.18                          | 0.05                          | 0.65                                      | 1.13                               | 330                 | -6                 | 6.2                          | 105                   | 90                   | 0                 | 28                          | 100                              | 1                | 724                      | Yes  | 5                                 | 100                          | Yes                              |  |
| 25  | Kempsey                  | 16,100  | 215,000                  | 158,000                       | 3,200                                      | 1,600               | 52,600   | 1,424                       | 241                      | 0.0                       | 0.1                     | 1,245          | 456                       | 0.6      | 50                                | 13 | 14 | 12 | 12 | 0.40                          | 0.34                          | 0.54                                      | 0.51                               | 563                 | 8                  | 0.4                          | 33                    | 278                  | 11                | 1                           | 74                               | 1                | 791                      | Yes  | 8                                 | 100                          | Yes+                             |  |
| Medians (% of LWUs basis) or totals for >10,000 |                          | 12,800  |                          |                               |  |                     |  |                             | 134                      | 0.5                       | 0.0                     |                | 335                       | 0.5      | 48                                | 26 | 15 | 2  | 0  | 0.34                          | 0.02                          | 0.93                                      | 0.81                               | 454                 | -1                 | 2.5                          | 39                    | 117                  | 9                 | 6                           | 100                              | 1                | 739                      |  |                                   |                              |                                  |  |
| LWUs with 3,001 - 10,000 Properties             |                          |   |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |    |    |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |
| 29  | Armidale Dumaresq        | 7,300   | 89,000                   | 62,000                        | 1,460                                      | 1,870               | 3,900  | 862                         | 298                      | 0.0                       | 0.4                     | 7              | 3                         | 0.0      | 13                                |    |    |    |    |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |

Table 5D: Sewerage - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY  |                   | SEWERAGE INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |      |      |                               |                               | SYSTEM PERFORMANCE                        |                                    |                     |                    |                              |                       |                      |                   |                             |                                  | BPM              |                          |  |                                   |                              |                                  |  |
|--|-------------------|---|--------------------------|-------------------------------|--|---------------------|--|-----------------------------|--------------------------|---------------------------|-------------------------|----------------|---------------------------|----------|-----------------------------------|----|----|------|------|-------------------------------|-------------------------------|---|------------------------------------|---------------------|--------------------|------------------------------|-----------------------|----------------------|-------------------|-----------------------------|----------------------------------|------------------|--------------------------|--|-----------------------------------|------------------------------|----------------------------------|--|
|  |                   | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint- enance | Mains Maint- enance Cost | Rehabilitations           |                         | Asset Renewals |                           |          | Assets in Condition as a % of WDV |    |    |      |      | Renewals Ratio                | Backlog Ratio                 | Asset Maintenance Ratio                   | Capital Expenditure Ratio          | Operating Cost      | Net Debt to Equity | Economic Real Rate of Return | Sewer Main Breaks     | Infiltration         | Sewer Overflows   | Sewerage Service Complaints | % Sge Treated that was compliant | Odour Complaints | Typical Residential Bill | Pollution Incident Response Mgmt Plan (PIRMP)? | STW Operators meeting NSW Reqmnts | Best-Practice Implementation |                                  |  |
|  |                   | \$/property F10/C8  | \$'000                   | \$'000 F10                    | \$'000                                     | \$'000 F15          | \$'000   | \$'000                      | \$'000 per 100km of Main | Mains (% of Total Length) | Service Conn- ections % | \$'000         | \$'000 per 100 km of Main | % of CRC | SGE Assets (86)                   |    |    |      |      | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F12 | WS & SGE % F22     | SGE % F18                    | Per 100km of main A14 | ML per 100km of main | Per 100km of main | Per 1000 props C11          | % E4                             | Per 1000 props   | \$/ assessment P6        | Yes/No   | No.                               | Overall %                    | Strategic Business Plan (Yes/No) |  |
|  |                   |   |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          | 1                                 | 2  | 3  | 4    | 5    |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |
| (73)   | (74)              | (75)  | (76)                     | (77)                          | (78)                                       | (79)                | (80)   | (81)                        | (82)                     | (83)                      | (84)                    | (85)           |                           |          |                                   |    |    | (87) | (88) | (89)                          | (90)                          | (91)                                      | (92)                               | (93)                | (94)               | (95)                         | (96)                  | (97)                 | (98)              | (99)                        | (100)                            | (100a)           | (100b)                   | (101)  | (102)                             |                              |                                  |  |
| 38   | Moree Plains      | 7,200   | 57,000                   | 28,000                        | 1,030                                      | 1,980               | 0  | 717                         | 393                      | 0.0                       | 0.5                     | 1,978          | 2,222                     | 3.5      | 26                                | 7  | 47 | 13   | 7    | 0.61                          | 0.00                          | 0.70                                      | 1.92                               | 444                 | 3                  | 4.1                          | 46                    | 101                  | 6                 | 23                          | 100                              | 0                | 630                      |  | 4                                 | 100                          | Yes*                             |  |
| 44   | Gunnedah          | 7,800   | 53,000                   | 31,000                        | 710  | 1,510               | 280  | 390                         | 179                      | 1.8                       | 0.3                     | 252            | 227                       | 0.5      | 7                                 | 21 | 16 | 56   | 0    | 0.87                          | 0.01                          | 1.00                                      | 2.13                               | 284                 | -22                | 4.9                          | 20                    | 45                   | 34                | 11                          | 100                              | 1                | 492                      | Yes  | 2                                 | 100                          | Yes                              |  |
| 46   | Narrabri          | 9,500   | 91,000                   | 38,000                        | 1,460                                      | 580                 | 0  | 387                         | 134                      | 1.8                       | 0.7                     | 0              |                           |          | 28                                | 45 | 15 | 12   | 0    | 0.00                          | 0.00                          | 1.14                                      | 0.40                               | 432                 | -24                | 0.0                          | 57                    | 8                    | 2                 | 17                          | 71                               | 1                | 677                      | Yes  | 4                                 | 78                           | Yes*                             |  |
| 43   | Tumut             | 7,900   | 51,000                   | 33,000                        | 950  | 760                 | 0  | 473                         | 236                      | 1.4                       | 0.1                     | 431            | 291                       | 0.9      | 77                                | 18 | 6  | 0    | 0    | 0.83                          | 0.00                          | 1.00                                      | 0.81                               | 630                 | -1                 | -0.2                         | 51                    |                      | 3                 | 21                          | 97                               | 0                | 635                      | Yes  | 8                                 | 100                          | Yes                              |  |
| 49   | Young             | 9,600   | 55,000                   | 37,000                        | 700  | 670                 | 370  | 539                         | 104                      | 2.1                       | 0.7                     | 257            | 271                       | 0.5      | 67                                | 8  | 14 | 10   | 2    | 0.38                          | 0.01                          | 1.00                                      | 0.96                               | 330                 | 3                  | 2.7                          | 80                    | 41                   | 8                 | 7                           | 83                               | 3                | 720                      | Yes  | 3                                 | 89                           | Yes                              |  |
| 39   | Cowra             | 9,300   | 48,000                   | 33,000                        | 560  | 810                 | 410  | 1,057                       | 233                      | 8.0                       | 0.2                     | 779            | 779                       | 1.6      | 10                                | 48 | 35 | 7    | 0    | 1.42                          | 0.01                          | 2.25                                      | 1.46                               | 441                 | 6                  | 3.1                          | 157                   |                      | 0                 | 44                          | 50                               | 0                | 781                      | Yes  | 4                                 | 100                          | Yes*                             |  |
| 45   | Upper Hunter      | 7,200   | 65,000                   | 31,000                        | 810  | 1,000               | 950  | 492                         | 319                      | 0.8                       | 0.3                     | 1,003          | 850                       | 1.5      | 12                                | 26 | 57 | 5    | 0    | 0.90                          | 0.03                          | 1.28                                      | 1.24                               | 453                 | -12                | 0.2                          | 10                    | 92                   | 7                 | 12                          | 100                              | 1                | 477                      | Yes  | 3                                 | 100                          | Yes                              |  |
| 52   | Snowy River       | 6,700   | 65,000                   | 33,000                        | 1,280                                      | 920                 | 9,210  | 353                         | 51                       | 2.2                       | 1.0                     | 225            | 242                       | 0.3      | 34                                | 11 | 38 | 15   | 2    | 0.18                          | 0.28                          | 0.52                                      | 0.72                               | 359                 | -8                 | 2.6                          | 33                    | 32                   | 0                 | 7                           | 81                               | 0                | 900                      | Yes  | 6                                 | 100                          | Yes                              |  |
| 51   | Forbes            | 9,500   | 45,000                   | 30,000                        | 550  | 310                 | 8,140  | 842                         | 419                      | 0.0                       | 0.7                     | 312            | 351                       | 0.7      | 0                                 | 14 | 63 | 23   | 0    | 0.57                          | 0.27                          | 0.82                                      | 0.57                               | 465                 | -16                | 0.9                          | 70                    | 29                   | 0                 | 29                          | 100                              | 1                | 644                      | Yes  | 1                                 | 100                          | Yes*                             |  |
| 50   | Cooma-Monaro      | 9,800   | 56,000                   | 32,000                        | 850  | 510                 | 0  | 974                         | 10                       | 0.0                       | 0.1                     | 310            | 282                       | 0.6      | 8                                 | 78 | 7  | 7    | 1    | 0.36                          | 0.00                          | 0.97                                      | 0.60                               | 532                 | -10                | 2.0                          | 35                    |                      | 121               | 41                          | 100                              | 0                | 820                      | Yes  | 3                                 | 100                          | Yes                              |  |
| 53   | Berrigan          | 4,500   | 39,000                   | 16,000                        | 590  | 50                  | 0  | 705                         |                          | 0.0                       | 0.3                     | 45             | 41                        | 0.1      | 0                                 | 80 | 20 | 0    | 0    | 0.39                          | 0.00                          | 1.01                                      | 0.08                               | 312                 | -19                | 0.4                          | 84                    | 69                   | 9                 | 51                          | 100                              | 5                | 477                      |  | 4                                 | 56                           | Yes*                             |  |
| 48   | Leeton            | 7,700   | 56,000                   | 25,000                        | 750  | 1,540               | 880  | 442                         | 185                      | 9.9                       | 14.1                    | 1,455          | 1,441                     | 2.6      | 28                                | 55 | 17 | 1    | 0    | 2.02                          | 0.03                          | 1.23                                      | 2.05                               | 466                 | -19                | -0.6                         | 19                    | 10                   | 0                 | 2                           | 100                              | 0                | 492                      | Yes  | 3                                 | 100                          | Yes*                             |  |
| 54   | Deniliquin        | 11,600  | 52,000                   | 38,000                        | 490  | 480                 | 430  | 558                         | 128                      | 0.0                       | 0.0                     | 386            | 361                       | 0.7      | 23                                | 26 | 28 | 13   | 9    | 0.80                          | 0.01                          | 0.84                                      | 0.98                               | 429                 | -8                 | 2.1                          | 28                    | 42                   | 0                 | 12                          | 100                              | 0                | 770                      | Yes  | 2                                 | 100                          | Yes                              |  |
| Medians (% of LWUs basis) or totals for 3,001 - 10,000 |                   | 9,300   |                          |                               |  |                     |  | 179                         | 0.6                      | 0.3                       |                         | 282            | 0.6                       |          | 26                                | 29 | 17 | 7    | 0    | 0.41                          | 0.01                          | 0.97                                      | 0.85                               | 429                 | -8                 | 2.0                          | 41                    | 42                   | 6                 | 16                          | 98                               | 1                | 635                      |  |                                   |                              |                                  |  |
| LWUs with 1,501 - 3,000 Properties                     |                   |   |                          |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |      |      |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |
| 47   | Bellingen         | 14,100  | 60,000                   | 43,000                        | 980  | 5,210               | 8,700  | 461                         | 98                       | 0.0                       | 0.6                     | 221            | 221                       | 0.4      | 35                                | 53 | 3  | 1    | 8    | 0.46                          | 0.26                          | 1.00                                      | 5.30                               | 662                 | -18                | 0.3                          | 22                    | 76                   | 2                 | 11                          | 100                              | 1                | 842                      |  | 4                                 | 100                          | Yes                              |  |
| 60   | Glen Innes Severn | 5,300   | 22,000                   | 15,000                        | 320  | 520                 | 6,220  | 45                          | 41                       | 2.7                       | 0.0                     | 486            | 438                       | 2.2      | 59                                | 33 | 1  | 7    | 0    | 0.00                          | 0.45                          | 0.37                                      | 1.59                               | 287                 | 6                  | 1.8                          | 47                    | 59                   | 47                | 18                          | 100                              | 0                | 450                      | Yes  | 3                                 | 100                          | Yes*                             |  |
| 58   | Cootamundra       | 7,200   | 38,000                   | 20,000                        | 450  | 130                 | 590  | 279                         | 189                      | 0.0                       | 0.4                     | 0              |                           |          | 0                                 | 10 | 77 | 12   | 0    | 0.00                          | 0.03                          | 0.76                                      | 0.29                               | 229                 | -16                | 1.4                          | 210                   | 159                  | 10                | 73                          | 100                              | 0                | 388                      | Yes  | 2                                 | 89                           | Yes*                             |  |
| 57   | Wellington        | 8,000   | 37,000                   | 21,000                        | 710  | 250                 | 1,350  | 467                         | 142                      | 0.0                       | 0.0                     | 254            | 279                       | 0.7      | 23                                | 37 | 33 | 6    | 1    | 0.36                          | 0.06                          | 0.93                                      | 0.36                               | 405                 | 6                  | 1.5                          | 31                    | 52                   | 0                 | 13                          | 100                              | 0                | 587                      | Yes  | 2                                 | 100                          | Yes*                             |  |
| 91   | Cabonne           | 20,400  | 50,000                   | 39,000                        | 730  | 1,480               | 1,260  | 779                         | 43                       | 2.7                       | 0.3                     | 0              |                           |          | 62                                | 32 | 6  | 0    | 0    | 0.73                          | 0.04                          | 0.90                                      | 2.01                               | 725                 | -4                 | -1.2                         | 22                    |                      | 3                 | 13                          | 0                                | 0                | 475                      | Yes  | 6                                 | 100                          | Yes*                             |  |
| 80   | Greater Hume      | 11,700  | 47,000                   | 31,000                        | 570  | 200                 | 0  | 97                          | 14                       | 0.0                       | 0.1                     | 127            | 165                       | 0.3      | 10                                | 41 | 49 | 0    | 0    | 0.22                          | 0.00                          | 0.84                                      | 0.35                               | 350                 | -7                 | 0.3                          | 10                    | 23                   | 0                 | 5                           | 100                              | 0                | 489                      | Yes  | 5                                 | 100                          | Yes                              |  |
| 59   | Lachlan           | 9,500   | 37,000                   | 21,000                        | 610  | 80                  | 43,830   | 616                         | 84                       | -                         | -                       | 83             | 109                       | 0.2      | 10                                | 11 | 71 | 8    | 1    | 0.14                          | 2.10                          | 0.28                                      | 0.14                               | 452                 | -14                | -2.6                         | -                     |                      |                   | -                           | 0                                | 0                | 458                      | Yes  | 1                                 | 100                          | Yes*                             |  |
| 65   | Murray            | 5,400   | 24,000                   | 17,000                        | 380  | 230                 | 0  | 290                         | 51                       | 0.0                       | 0.4                     | 190            | 192                       | 0.8      | 20                                | 51 | 21 | 8    | 0    | 0.61                          | 0.00                          | 1.04                                      | 0.61                               | 333                 | -13                | 1.9                          | 16                    | 22                   | 0                 | 4                           | 100                              | 0                | 389                      | Yes  | 6                                 | 100                          | Yes*                             |  |
| 62   | Narromine         | 9,000   | 29,000                   | 18,000                        | 330  | 690                 | 330  | 202                         | 69                       | 3.7                       | 0.0                     | 625            | 1,157                     | 2.2      | 5                                 | 23 | 55 | 15   | 2    | 1.61                          | 0.02                          | 1.01                                      | 2.08                               | 474                 | -29                | -0.2                         | 24                    |                      | 0                 | 6                           | 100                              | 0                | 548                      | Yes  | 4                                 | 100                          | Yes                              |  |
| 56   | Yass Valley       | 7,500   | 38,000                   | 18,000                        | 570  | 0                   | 0  | 130                         |                          | 0.0                       | 0.4                     | 0              |                           |          | 45                                | 44 | 11 | 0    | 0    | 0.00                          | 0.00                          | 0.98                                      | 0.00                               | 433                 | 18                 | 2.9                          | 29                    | 40                   | 0                 | 23                          | 100                              | 0                | 595                      | Yes  | 2                                 | 100                          | Yes+                             |  |
| 61   | Liverpool Plains  | 13,200  | 29,000                   |                               |  |                     |  |                             |                          |                           |                         |                |                           |          |                                   |    |    |      |      |                               |                               |   |                                    |                     |                    |                              |                       |                      |                   |                             |                                  |                  |                          |  |                                   |                              |                                  |  |



Table 5D: Sewerage - Infrastructure Asset Condition and Performance - 2014-15

| WATER UTILITY   |                 | SEWERAGE INFRASTRUCTURE INDICATORS (including SPECIAL SCHEDULE 7 - Condition of Public Works - refer to note 2) |                          |                               |  |                     |  |                            |                         |                 |                           |                |                 |      |                                   |     |     |                               |                               |   |                                    | SYSTEM PERFORMANCE      |                           |                |                       |                              |                   |                    |                 |                             |                                  | BPM              |                          |  |                                   |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
|---|-----------------|---|--------------------------|-------------------------------|--|---------------------|--|----------------------------|-------------------------|-----------------|---------------------------|----------------|-----------------|------|-----------------------------------|-----|-----|-------------------------------|-------------------------------|---|------------------------------------|-------------------------|---------------------------|----------------|-----------------------|------------------------------|-------------------|--------------------|-----------------|-----------------------------|----------------------------------|------------------|--------------------------|--|-----------------------------------|------------------------------|----------|-----|--|-----|--|----|--|----|--|---|--|----|--|-----|--|---|--|-----|--|
|   |                 | WDV CRC per property  | Current Replacement Cost | Written Down Replacement Cost | Current Cost Depreciation of System Assets | Capital Expenditure | Estimated Cost to Bring to Satisfactory Standard (BTS) | Actual Annual Maint-enance | Mains Maint-enance Cost | Rehabilitations |                           | Asset Renewals |                 |      | Assets in Condition as a % of WDV |     |     |                               |                               | Renewals Ratio                            | Backlog Ratio                      | Asset Maintenance Ratio | Capital Expenditure Ratio | Operating Cost | Net Debt to Equity    | Economic Real Rate of Return | Sewer Main Breaks | Infiltration       | Sewer Overflows | Sewerage Service Complaints | % Sge Treated that was compliant | Odour Complaints | Typical Residential Bill | Pollution Incident Response Mgmt Plan (PIRMP)? | STW Operators meeting NSW Reqmnts | Best-Practice Implementation |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
|   |                 |   |                          |                               |  |                     |  |                            |                         |                 |                           |                |                 |      |                                   |     |     |                               |                               |   |                                    |                         |                           |                |                       |                              |                   |                    |                 |                             |                                  |                  |                          |  |                                   |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
|   |                 |   |                          |                               |  |                     |  |                            |                         |                 |                           |                |                 |      |                                   |     |     |                               |                               |   |                                    |                         |                           |                |                       |                              |                   |                    |                 |                             |                                  |                  |                          |  |                                   |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| \$/property F10/C8  | \$'000          | \$'000 F10  | \$'000                   | \$'000 F15                    | \$'000                                     | \$'000              | \$'000 per 100km of Main                               | Mains (% of Total Length)  | Service Conn-ections %  | \$'000          | \$'000 per 100 km of Main | % of CRC       | SGE Assets (86) |      |                                   |     |     | Asset Renewals / Depreciation | BTS / Value of Infrastructure | Actual maintenance / Required Maintenance | Capital expenditure / Depreciation | OMA \$/property F12     | WS & SGE % F22            | SGE % F18      | Per 100km of main A14 | ML per 100km of main         | Per 100km of main | Per 1000 props C11 | % E4            | Per 1000 props              | \$/ assessment P6                | Yes/No           | No.                      | Overall %                                      | Strategic Business Plan (Yes/No)  |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| (73)  | (74)            | (75)  | (76)                     | (77)                          | (78)                                       | (79)                | (80)   | (81)                       | (82)                    | (83)            | (84)                      | (85)           | 1               | 2    | 3                                 | 4   | 5   | (87)                          | (88)                          | (89)                                      | (90)                               | (91)                    | (92)                      | (93)           | (94)                  | (95)                         | (96)              | (97)               | (98)            | (99)                        | (100)                            | (100a)           | (100b)                   | (101)  | (102)                             |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| LWUs with 200 - 1,500 Properties                          |                 |   |                          |                               |  |                     |  |                            |                         |                 |                           |                |                 |      |                                   |     |     |                               |                               |   |                                    |                         |                           |                |                       |                              |                   |                    |                 |                             |                                  |                  |                          |  |                                   |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 84  | Gilgandra       | 6,500   | 18,000                   | 8,000                         | 380  | 90                  | 190  | 284                        | 124                     | 0.0             | 0.0                       | 51             | 138             | 0.3  | 2                                 | 35  | 61  | 2                             | 0                             | 0.14                                      | 0.02                               | 1.03                    | 0.23                      | 363            | -12                   | -0.5                         | 41                | 71                 | 11              | 23                          | 100                              | 0                | 557                      | Yes  | 4                                 | 89                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 73  | Upper Lachlan   | 8,700   | 23,000                   | 13,000                        | 470  | 240                 | 0  | 249                        | 36                      | 8.9             | 1.3                       | 240            | 429             | 1.0  | 56                                | 22  | 18  | 4                             | 0                             | 0.59                                      | 0.00                               | 0.95                    | 0.51                      | 476            | -10                   | 1.0                          | 9                 | 214                | 0               | 5                           | 100                              | 0                | 737                      | Yes  | 4                                 | 89                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 87  | Bourke          | 6,400   | 15,000                   | 8,000                         | 190  | 0                   | 1,600  | 112                        | 197                     | 0.0             | 0.8                       | 0              |                 |      | 9                                 | 15  | 67  | 0                             | 9                             | 0.00                                      | 0.21                               | 0.97                    | 0.00                      | 455            | -13                   | 0.3                          | 53                | 44                 | 3               | 59                          | 100                              | 0                | 632                      |  |                                   | 89                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 86  | Hay             | 8,000   | 22,000                   | 10,000                        | 190  | 150                 | 0  | 105                        | 151                     | 0.0             | 0.2                       | 149            | 403             | 0.7  | 0                                 | 40  | 40  | 20                            | 0                             | 0.81                                      | 0.00                               | 0.50                    | 0.81                      | 482            | -17                   | 1.1                          | 81                | 54                 | 0               | 39                          | 100                              | 0                | 649                      | Yes  | 4                                 | 78                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 83  | Oberon          | 9,400   | 19,000                   | 12,000                        | 160  | 90                  | 1,000  | 37                         | 68                      | 0.0             | 0.4                       | 0              |                 |      | 43                                | 37  | 17  | 3                             | 0                             | 0.62                                      | 0.09                               | 0.55                    | 0.60                      | 399            | -7                    | 1.7                          | 21                | 39                 | 63              | 4                           | 100                              | 0                | 513                      | Yes  | 1                                 | 89                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 81  | Gwydir          | 7,900   | 12,000                   | 9,000                         | 80   | 0                   | 2,580  | 421                        | 59                      | 0.0             | 0.2                       | 0              |                 |      | 24                                | 72  | 1   | 0                             | 3                             | 0.00                                      | 28.39                              | 1.00                    | 0.00                      | 323            | -5                    | 2.9                          | 78                | 44                 | 39              | 0                           | 100                              | 0                | 500                      |  | 5                                 | 89                           | Yes+     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 85  | Uralla          | 5,600   | 8,000                    | 6,000                         | 200  | 40                  | 0  | 171                        | 166                     | 0.0             | 0.0                       | 43             | 123             | 0.6  | 15                                | 64  | 21  | 0                             | 0                             | 0.22                                      | 0.00                               | 1.06                    | 0.21                      | 364            | -11                   | -0.4                         | 34                | 49                 | 3               | 4                           | 42                               | 0                | 520                      | Yes  | 2                                 | 67                           |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 95  | Weddin          | 6,900   | 13,000                   | 7,000                         | 40   | 0                   | 0  | 48                         | 10                      | 3.2             | 0.2                       | 0              |                 |      | 0                                 | 100 | 0   | 0                             | 0                             | 0.00                                      | 0.00                               | 1.12                    | 0.00                      | 334            | -9                    | 1.9                          | 203               | 65                 | 10              | 69                          | 100                              | 0                | 427                      | Yes  | 2                                 | 78                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 89  | Bogan           | 7,400   | 11,000                   | 7,000                         | 90   | 0                   | 440  | 149                        | 380                     | 0.0             | 0.1                       | 0              |                 |      | 14                                | 18  | 68  | 0                             | 0                             | 0.32                                      | 0.06                               | 0.62                    | 0.00                      | 456            | -15                   | 3.7                          | 0                 | 50                 | 0               | 15                          | 0                                | 0                | 540                      | Yes  | 3                                 | 100                          | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 76  | Harden          | 7,600   | 16,000                   | 7,000                         |  | 10                  | 250  | 29                         | 431                     | 2.4             | 0.1                       | 0              |                 |      | 15                                | 2   | 76  | 8                             | 0                             | 0.00                                      | 3.54                               | 0.29                    | 0.04                      | 516            | -13                   | -1.2                         | 5                 | 5                  | 2               | 19                          | 70                               | 0                | 614                      | Yes  | 2                                 | 78                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 88  | Wakool          | 12,300  | 27,000                   | 12,000                        | 430  | 360                 | 0  | 43                         | 47                      | 2.1             | 0.0                       | 356            | 757             | 1.3  | 0                                 | 92  | 8   | 1                             | 0                             | 0.83                                      | 0.00                               | 0.42                    | 0.82                      | 350            | -9                    | 0.1                          | 0                 |                    | 0               | 50                          | 100                              | 0                | 578                      |  | 4                                 | 56                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 93  | Tumbarumba      | 14,400  | 23,000                   | 14,000                        | 220  | 2,340               | 70   | 110                        | 87                      | 2.1             | 0.1                       | 2,335          | 4,968           | 10.0 | 45                                | 30  | 14  | 12                            | 0                             | 10.61                                     | 0.01                               | 0.51                    | 10.42                     | 325            | -3                    | 1.0                          | 9                 |                    | 0               | 5                           | 85                               | 0                | 579                      | Yes  | 4                                 | 100                          | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 94  | Gundagai        | 10,100  | 15,000                   | 8,000                         | 130  | 340                 | 0  | 171                        | 16                      | -               | -                         | 335            | 459             | 2.2  | 0                                 | 0   | 0   | 0                             | 100                           | 2.58                                      | 0.00                               | 1.19                    | 2.58                      | 510            | -12                   | 2.8                          | -                 |                    |                 | -                           | 100                              | 0                | 612                      | Yes  | 4                                 | 67                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 92  | Carrathool      | 7,100   | 7,000                    | 6,000                         | 80   | 30                  | 110  | 67                         | 78                      | 0.0             | 0.0                       | 26             | 113             | 0.4  | 10                                | 62  | 26  | 2                             | 0                             | 0.37                                      | 0.02                               | 0.79                    | 0.33                      | 184            | 2                     | 0.9                          | 4                 |                    | 0               | 30                          | 100                              | 0                | 405                      |  | 1                                 | 33                           |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 96  | Warren          | 5,300   | 14,000                   | 4,000                         | 250  | 230                 | 170  | 133                        | 388                     | 5.9             | 0.7                       | 106            | 624             | 0.8  | 58                                | 18  | 22  | 3                             | 0                             | 0.48                                      | 0.04                               | 1.16                    | 0.94                      | 488            | -19                   | -3.4                         | 441               | 65                 | 0               | 43                          | 30                               | 0                | 485                      |  | 1                                 | 89                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 99  | Coolamon        | 12,600  | 18,000                   | 13,000                        | 210  | 110                 | 100  | 200                        | 114                     | 0.0             | 0.3                       | 92             | 209             | 0.5  | 68                                | 29  | 3   | 0                             | 0                             | 0.63                                      | 0.01                               | 1.11                    | 0.53                      | 271            | -11                   | 0.2                          | 7                 | 5                  | 0               | 3                           | 100                              | 0                | 380                      | Yes  | 2                                 | 56                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 102   | Lockhart        | 7,600   | 13,000                   | 7,000                         | 160  | 0                   | 0  | 128                        | 24                      | 0.0             | 0.1                       | 0              |                 |      | 2                                 | 24  | 45  | 19                            | 9                             | 0.00                                      | 0.00                               | 0.93                    | 0.00                      | 213            | -26                   | 1.0                          | 0                 |                    | 0               | 19                          | 69                               | 0                | 490                      | Yes  | 3                                 | 89                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 98  | Walcha          | 5,400   | 5,000                    | 4,000                         | 70   | 50                  | 150  | 72                         | 70                      | 0.0             | 0.1                       | 0              |                 |      | 22                                | 41  | 21  | 12                            | 5                             | 0.67                                      | 0.04                               | 1.18                    | 0.66                      | 363            | -7                    | 0.6                          | 23                |                    | 30              | 15                          | 33                               | 0                | 440                      | Yes  |                                   | 89                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 100   | Bairnald        | 8,100   | 13,000                   | 7,000                         | 200  | 0                   | 0  | 101                        |                         | 0.0             | 0.2                       | 0              |                 |      | 0                                 | 9   | 90  | 0                             | 0                             | 0.00                                      | 0.00                               | 1.49                    | 0.00                      | 271            | -7                    | -2.3                         | 21                |                    | 0               | 9                           | 100                              | 0                | 269                      |  | 1                                 | 56                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 97  | Bombala         | 17,400  | 29,000                   | 13,000                        | 360  | 40                  | 7,960  | 29                         | 49                      | 0.0             | 0.0                       | 39             | 111             | 0.1  | 0                                 | 0   | 100 | 0                             | 0                             | 0.11                                      | 0.60                               | 0.64                    | 0.11                      | 373            | -15                   | -1.5                         | 34                | 3                  | 0               | 19                          | 44                               | 4                | 562                      | Yes  | 4                                 | 78                           |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 101   | Murrumbidgee    | 9,300   | 10,000                   | 7,000                         | 120  | 70                  | 0  | 87                         | 113                     | -               | -                         | 72             | 313             | 0.7  | 8                                 | 38  | 54  | 1                             | 0                             | 0.58                                      | 0.00                               | 1.40                    | 0.58                      | 233            | -16                   | -1.1                         | -                 |                    |                 | -                           | 0                                | 0                | 309                      | Yes  | 2                                 | 56                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 90  | Guyra           | 15,400  | 22,000                   | 18,000                        | 220  | 30                  | 420  | 133                        |                         | 0.0             | 0.0                       | 30             | 53              | 0.1  | 6                                 | 51  | 42  | 1                             | 0                             | 0.15                                      | 0.02                               | 0.86                    | 0.14                      | 333            | -7                    | 0.2                          | 21                | 102                | 2               | 3                           | 100                              | 1                | 580                      | Yes  | 2                                 | 78                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 104   | Boorowa         | 8,600   | 13,000                   | 6,000                         | 170  | 160                 | 1,760  | 136                        | 220                     | 6.7             | 0.3                       | 163            | 543             | 1.3  | 2                                 | 98  | 0   | 0                             | 0                             | 0.84                                      | 0.31                               | 1.17                    | 0.94                      | 420            | -11                   | -0.2                         | 97                | 67                 | 0               | 9                           | 100                              | 0                | 620                      | Yes  | 3                                 | 89                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 105   | Brewarrina      | 11,200  | 11,000                   | 5,000                         | 150  | 80                  | 90   | 139                        | 225                     | 0.0             | 0.4                       | 79             | 494             | 0.7  | 15                                | 84  | 0   | 0                             | 0                             | 0.00                                      | 0.02                               | 0.93                    | 0.52                      | 583            | -17                   | 0.1                          | 6                 | 75                 | 0               | 35                          | 100                              | 0                | 756                      |  | 6                                 | 78                           | Yes      |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 106   | Jerilderie      | 8,100   | 8,000                    | 3,000                         | 100  | 10                  |  | 120                        | 58                      | 0.0             | 0.0                       | 0              |                 |      | 0                                 | 0   | 100 | 0                             | 0                             | 0.00                                      | 0.00                               | 0.95                    | 0.12                      | 419            | -27                   | -1.1                         | 17                | 83                 | 0               | 0                           | 0                                | 0                | 480                      | Yes  | 2                                 | 78                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 103   | Central Darling | 7,500   | 5,000                    | 3,000                         | 80   | 0                   | 990  | 68                         | 235                     | 13.0            | 0.5                       | 0              |                 |      | 11                                | 10  | 54  | 25                            | 1                             | 0.99                                      | 0.36                               | 0.31                    | 0.00                      | 200            | -2                    | 6.6                          | 26                |                    | 4               | 73                          | 100                              | 8                | 390                      |  | 1                                 | 78                           |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| 107   | Urana           | 22,100  | 9,000                    | 7,000                         | 80   | 0                   | 10   | 95                         | 73                      | 0.0             | 0.0                       | 0              |                 |      | 0                                 | 101 | 0   | 0                             | 0                             | 0.00                                      | 0.00                               | 1.01                    | 0.00                      | 509            | -9                    | -0.6                         | 0                 |                    | 0               | 0                           | 100                              | 0                | 385                      |  | 2                                 | 67                           | Yes*     |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| Medians (% of LWUs basis) or totals for 200 - 1,500 Props |                 | 8,100   |                          |                               |  |                     |  | 87                         |                         | 0.0             |                           | 0.1            |                 | 403  |                                   | 0.7 |     | 9                             |                               | 35  |                                    | 22                      |                           | 1              |                       | 0                            |                   | 0.32               |                 | 0.02                        |                                  | 0.95             |                          | 0.23   |                                   | 364                          |          | -11 |  | 0.2 |  | 21 |  | 54 |  | 0 |  | 15 |  | 100 |  | 0 |  | 520 |  |
| Medians (% of LWUs basis)                                 |                 | 9,400   | Total (\$M)              | Total (\$M)                   | Total (\$M)                                | Total (\$M)         | Total (\$M)  | Total (\$M)                | 126                     | 0.1             | 0.1                       | Total (\$M)    | 282             | 0.6  | 22                                | 30  | 17  | 3                             | 0                             | 0.36                                      | 0.02                               | 0.93                    | 0.60                      | 420            | -8                    | 1.2                          | 32                | 53                 | 3               | 13                          | 100                              | 0                | 580                      | Total  | Total                             | Overall                      | Total    |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| Medians (Statewide basis)                                 |                 | 11,600  | 13,800                   | 9,300                         | 185  | 208                 | 396  | 91                         | 134                     | 0.5             | 0.1                       | 90             | 387             | 0.5  | 43                                | 32  | 14  | 2                             | 0                             | 0.38                                      | 0.02                               | 0.94                    | 0.89                      | 420            | -1                    | 1.7                          | 35                | 83                 | 10              | 6                           | 100                              | 1                | 669                      | 81 (82%)                                       | 419                               | 89%                          | 93 (94%) |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |
| National Medians  |                 | 9,350   |                          |                               |  |                     |  |                            |                         |                 |                           |                |                 |      |                                   |     |     |                               |                               |   |                                    | 400                     |                           | 11             |                       | 3.0                          |                   | 17                 |                 |                             |                                  | 1                |                          | 667  |                                   |                              |          |     |  |     |  |    |  |    |  |   |  |    |  |     |  |   |  |     |  |

Notes

1. Table 5D shows each NSW regional local water utility's [LWU] **sewerage infrastructure asset condition** [col 86], **asset rehabilitations** [col 81, 82], **asset renewal expenditure** [col 83 to 85], **financial performance** [col 73 to 80 and 87 to 93], sewerage **system performance** [col 94 to 99], typical residential bill [TRB - col 100], strategic business planning [SBP - col 102, this includes a 20 to 30-year total asset management plan [capital works plan identifying each of works for growth, improved standards and renewals, operation plan, including non-build solutions and maintenance plan] and 20 to 30-year financial plan] and its level of implementation of the Best-Practice Management [BPM] of Water & Sewerage required outcomes [BPM - col 101]. Table 5D also shows the Statewide median for each indicator, as well as the **2014-15 National Median** for the National Water Initiative [NWI] performance indicators [col 72, 91, 92, 93, 94, 97, 100].
2. The sources of data for Table 5D are: col 78, 79, 86 to 90 are from each council's reported Special Schedule 7; col 73 to 77 and col 91 to 93 from each council's reported Special Schedules 5 and 6; and col 94 to 102 are based on the results reported by each council in the NSW Water Supply and Sewerage Performance Monitoring Database. Note that minor errors identified in the reported results for column 86 for Weddin have been corrected.
3. Totals for sewerage in regional NSW:

o Total current replacement cost of system assets - \$13.8B [col 74],

o Total written down replacement cost - \$9.3B [col 75],

o Total annual depreciation - \$185M [col 76],

o Total estimated cost to Bring to Satisfactory Standard<sup>1</sup> (BTS) – \$393M [col 78],

o Total annual maintenance expenditure - \$90M [col 79],

o Total capital expenditure - \$208M [col 77],

o Total asset renewal expenditure - \$90M [col 83],

o Pollution Incident Response Management Plan (PIRMP)? - 81 (82%) [col 100a]

o Strategic Business Plan [SBP] - 93 (94%) [col 102] and Overall BPM implementation [SGE] – 89% [col 101].
- The total \$393M for BTS is 2.1 times the annual depreciation of \$185M, 2.9% of the current replacement cost of system assets<sup>2</sup> of \$13.8B and 59% of the 2014-15 annual sewerage revenue of \$663M.



Notes (continued)

4. Statewide medians for sewerage in regional NSW:
  - Written down current replacement cost per connected property - \$11,600 [col 73] ; National Median \$9,380
  - Assets in condition 1 - 43% [col 86]
  - Assets in condition 2 - 32% [col 86]
  - Assets in condition 3 - 14% [col 86]
  - Assets in condition 4 - 2% [col 86]
  - Assets in condition 5 - 0% [col 86]
  - Sewer main rehabilitations % of total length – 0.5 km [col 81]
  - Service connection rehabilitations – 0.1% [col 82]
  - Asset renewals per 100 km of main – \$387,000 [col 84]
  - Asset renewals / current replacement cost of assets – 0.5% [col 85]
  - Renewals Ratio [Asset Renewals/Depreciation] – 0.38 [col 87]
  - Backlog Ratio [BTS/ Value of Infrastructure] – 0.02 [col 88]
  - Asset Maintenance Ratio [Actual Maintenance/Required Maintenance] – 0.94 [col 89]
  - Capital Expenditure Ratio [Capital expenditure/Depreciation] – 0.89 [col 90]
  - Operating Cost [OMA cost/connected property – F12] - \$420 [col 91]; National Median \$400
  - Sewer Mains Maintenance cost per 100 km of main - \$134,000 [col 80]
  - Net Debt to Equity [WS & SGE – F22] – -1% [col 92]; National Median 11%
  - Economic Real Rate of Return [F18] – 1.7% [col 93]; National Median 3.0%
  - Sewer Main breaks/100km of main [A4] – 35 [col 94]; National Median 17
  - Infiltration/ML/100km of main – 83 [col 95]
  - Sewer Overflows/100km of main – 10 [col 96]
  - Sewerage service complaints/1000 properties [C11] – 6 [col 94]; National Median 1
  - % sewage treated that was compliant [E4] – 100% [col 98]
  - Sewage odour complaints/1000 properties – 1 [col 99]
  - Typical Residential Bill/assessment [2014-15 – P6] - \$669 [col 100]; National Median \$667.

The totals in note 3 on the previous page and the statewide medians in this note 4 provide useful information on the infrastructure asset condition, asset rehabilitations, asset renewal expenditure, financial performance, system performance, the typical residential bill and the extent of asset management and strategic business planning for sewerage in regional NSW.

Disclosure of the 32 indicators shown for each LWU in Table 5D provides transparency and public accountability.

5. LWU Planning:

As indicated on page 8 of the *NSW Water and Sewerage Strategic Business Planning Guidelines* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), the provision of water supply and sewerage services is highly capital intensive. Accordingly, sound planning, analysis and community involvement are essential.

As noted on pages 3 and 22 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report, each LWU needs to prepare a 30-year Integrated Water Cycle Management (IWCCM) Strategy, financial plan and report in accordance with the July 2014 IWCCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

This involves a 30-year total asset management plan (TAMP – refer to note 1), which includes a **sound 30-year renewals plan** in accordance with Item 7F of the Strategic Business Planning Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Only ‘proven’ renewals projects should be included in the first 5 years of a LWU’s renewals plan.

6. Comment on reported Asset Condition [col 86]:

Note 4 above shows that the Statewide medians for assets in condition 1, 2, 3, 4 and 5 are 43%, 32%, 14%, 2% and 0% respectively.

With regard to assets in **condition 5 (very poor)**, **58 LWUs** (59%) had a **0%** result.

The performance of the following 12 utilities, which had a result greater than 6% for condition 5 is analysed below using the results in Table 5D:

  - Bland 100% - has a **low TRB and a low OMA cost**; has full cost recovery, reported a moderate level of sewerage service and odour complaints, 100% of sewage complied with licence and had a high level of sewer main chokes and breaks. Rehabilitated 4.1% of its sewerage mains and 0.2% of its service connections in 2014-15. Has a strategic business plan (SBP) and now needs to prepare a 30-year IWCCM Strategy and financial plan as its existing SBP is over 4 years old. Also needs to apply appropriate non-residential sewerage charges. Has implemented 78% of the BPM outcomes. Has 2 fully qualified sewage treatment works operators.

1 BTS - Estimated cost to bring to a satisfactory standard.

2 This value of 2.9% is consistent with the col 88 value of 0.02 (ie. 2%) for the median LWU. The value of the Statewide median for col 88 is 0.02, which indicates a lower BTS proportion for the larger LWUs.

6. Comment on reported Asset Condition [col 86]: (continued from left)
  - Gundagai 100% - has a **low TRB and a high OMA cost**, has full cost recovery, did not report service or odour complaints, sewage licence compliance, sewer main chokes & breaks, rehabilitation of its sewerage mains & service connections in 2014-15 but had 18 service complaints & 14 sewer main breaks & chokes per 1000 properties in 2013-14. Has a SBP and now needs to prepare a 30-year IWCCM Strategy & financial plan as its existing SBP is over 4 years old. Has implemented 67% of the BPM outcomes. Has 4 fully qualified sewage treatment works operators.
  - Hawkesbury 19% - has a **low TRB and a high OMA cost**; has full cost recovery, reported a moderate level of sewerage service and odour complaints. Its sewage effluent did not comply with its licence and had a moderate level of sewer main chokes and breaks. Asset renewals expenditure was \$161,000 per 100 km of main, a total of \$296,000 or 0.2% of CRC (the Current Replacement Cost of system assets. Has an IWCCM Evaluation and a strategic business plan (SBP) and now needs to prepare a 30-year IWCCM Strategy and financial plan as its existing SBP is over 4 years old. Has implemented 100% of the BPM outcomes. Has 3 fully qualified sewage treatment works operators.
  - Kempsey 12% - has a **moderate TRB and a high OMA cost**; has full cost recovery, reported a low level of sewerage service & odour complaints, 74% of sewage complied with licence and had a moderate level of sewer main chokes and breaks. Asset renewals expenditure was \$456,000 per 100 km of main, a total of \$1,250,000 or 0.6% of CRC (Current Replacement Cost of system assets). Rehabilitated 0.1% of service connections in 2014-15. Has a strategic business plan (SBP) and now needs to prepare a 30-year IWCCM Strategy and financial plan as its existing IWCCM Strategy is over 6 years old. Has implemented 100% of the BPM outcomes. Has 8 fully qualified sewage treatment works operators.
  - Walgett 12% - has a **very low TRB and OMA cost**; has full cost recovery, reported a low level of sewerage service and odour complaints, 67% of sewage complied with licence and had a very high level of sewer main chokes and breaks. Asset renewals expenditure was \$431,000 per 100 km of main, a total of \$207,000 or 1.1% of CRC (the Current Replacement Cost of system assets. Rehabilitated 2.1% of its sewerage mains and 0.0% of its service connections in 2014-15. Does not have a strategic business plan or IWCCM strategy and now needs to prepare a 30-year IWCCM Strategy and financial plan. Also needs to apply appropriate non-residential sewerage charges, trade waste fees and charges and developer charges. Has implemented 56% of the BPM outcomes. Has one sewage treatment works operator undergoing training.
  - Bourke 9% - has a **low TRB and moderate OMA cost**; has full cost recovery, reported a very high level of sewerage service complaints, 100% of sewage complied with licence and had a high level of sewer main chokes and breaks. Rehabilitated 0.0% of its sewerage mains and 0.8% of its service connections in 2014-15. Has a strategic business plan and IWCCM Strategy. Also needs to apply appropriate non-residential sewerage charges. Has implemented 89% of the BPM outcomes. Has 5 sewage treatment works operators in training.
  - Deniliquin 9% - has a **moderate TRB and OMA cost**; has full cost recovery, reported a moderate level of sewerage service and odour complaints, 100% of sewage complied with licence and had a moderate level of sewer main chokes and breaks. Asset renewals expenditure was \$361,000 per 100 km of main, a total of \$386,000 or 0.7% of CRC (the Current Replacement Cost of system assets. Has a strategic business plan and IWCCM Strategy. Has implemented 100% of the BPM outcomes. Has 2 fully qualified sewage treatment works operators.
  - Lithgow 9% - has a **moderate TRB and high OMA cost**; has full cost recovery, has reported a high level of sewerage service complaints. 81% of sewage complied with licence & had a very high level of sewer main chokes & breaks. Asset renewals expenditure was \$161,000 / 100km main, a total of \$1,200,000 or 0.2% of CRC (Current Replacement Cost of system assets). Rehabilitated 1.8% of sewerage mains in 2014-15. Has a strategic business plan (SBP) & now needs to prepare 30-year IWCCM Strategy & financial plan as its existing SBP is over 4 years old. Also needs to apply appropriate developer charges. Has implemented 89% of the BPM outcomes. Has 6 fully qualified sewage treatment works operators.
  - Lockhart 9% - has a **low TRB and OMA cost**; has full cost recovery, reported a moderate level of sewerage service and odour complaints, 69% of sewage complied with licence and reported no sewer main chokes and breaks. Rehabilitated 0.0% of its sewerage mains and 0.1% of its service connections in 2014-15. Has a current strategic business plan and IWCCM Evaluation. Also needs to apply appropriate developer charges. Has implemented 89% of the BPM outcomes. Has 3 fully qualified sewage treatment works operators.
  - Bellingen 8% - has a **high TRB and a high OMA cost**; has full cost recovery, reported a moderate level of sewerage service & odour complaints, 100% of sewage complied with licence and had a low level of sewer main chokes and breaks. Asset renewals expenditure was \$221,000 per 100 km of main, a total of \$221,000 or 0.4% of CRC (the Current Replacement Cost of system assets. Rehabilitated 0.6% of service connections in 2014-15. Has a strategic business and IWCCM Strategy. Has implemented 100% of the BPM outcomes. Has 4 fully qualified sewage treatment works operators and one operator undergoing training.
  - Muswellbrook 8% - has a **low TRB and OMA cost**; has full cost recovery, reported a low level of sewerage service and odour complaints, 47% of sewage complied with licence and had a low level of sewer main chokes and breaks. Asset renewals expenditure was \$246,000 per 100 km of main, a total of \$433,000 or 0.5% of CRC (Current Replacement Cost of system assets). Rehabilitated 0.6% of its sewerage mains and 0.1% of its service connections in 2014-15. Has a strategic business plan and now needs to prepare a 30-year IWCCM Strategy & financial plan as its existing IWCCM Strategy is over 6 years old. Has implemented 100% of the BPM outcomes. Has 3 fully qualified sewage treatment works operators.
  - Moree Plains 7% - has a **low TRB and a moderate OMA cost**; has full cost recovery, reported a very high level of sewerage service complaints, 100% of sewage complied with licence and had a high level of sewer main chokes and breaks. Asset renewals expenditure was \$2,220,000 per 100 km main, a total of \$1,980,000 or 3.5% of CRC (the Current Replacement Cost of system assets). Rehabilitated 0.5% of service connections in 2014-15. Has a strategic business plan (SBP) & now needs to prepare 30-year IWCCM Strategy & financial plan as its existing SBP is over 4 years old. Has implemented 100% of the BPM outcomes. Has 4 fully qualified sewage treatment works operators.



Table 6: Water supply - residential charges, bills & cost recovery

| WATER UTILITY                 |                                   |                 |                 | RESIDENTIAL CHARGES |                           |             |              |                |                                      |              |              |                |                      |             |           |         |                                    |       | COST RECOVERY        |       |       |                          |        |        |  |        |        |                  |       |       |                     |       |       | Total Connected Properties |  |           |       |   |       |       |            |        |                     |  |
|-------------------------------|-----------------------------------|-----------------|-----------------|---------------------|---------------------------|-------------|--------------|----------------|--------------------------------------|--------------|--------------|----------------|----------------------|-------------|-----------|---------|------------------------------------|-------|----------------------|-------|-------|--------------------------|--------|--------|--|--------|--------|------------------|-------|-------|---------------------|-------|-------|----------------------------|--|-----------|-------|---|-------|-------|------------|--------|---------------------|--|
|                               |                                   |                 |                 | Type of Tariff      | Fixed Charge (or Minimum) |             |              | Special Levies | Usage Charge (for Step 1 and Step 2) |              |              |                |                      |             |           |         | Billing (2006 National Guidelines) |       | Operating Cost (OMA) |       |       | Typical Developer Charge |        |        | Typical Residential Bill based on Col(14b) |        |        | Return on Assets |       |       | ERRR (Water Supply) |       |       |                            | Residential Revenue from Usage Charges |           |       | Avge Annual Residential Water Supplied <sup>3</sup> |       |       |            |        | Full Cost Recovery? |  |
|                               |                                   |                 |                 |                     |                           |             |              |                | Step 1                               |              |              |                | Step 2               |             |           |         |                                    |       |                      |       |       |                          |        |        |  |        |        |                  |       |       |                     |       |       |                            |  |           |       |   |       |       |            |        |                     |  |
|                               |                                   |                 |                 |                     | (1)<br>P1                 | (2)<br>P1.2 | (4)<br>P1.12 |                | Step (kL)                            |              |              | Charges (c/kL) |                      |             | Step (kL) |         |                                    |       |                      |       |       |                          |        |        |  |        |        |                  |       |       |                     |       |       |                            |  |           |       |   |       |       |            |        |                     |  |
|                               |                                   |                 |                 |                     |                           |             |              | (5a)<br>P1.3   | (5b)<br>P1.3                         | (5c)<br>P1.4 | (5d)<br>P1.4 | (14a)          | kL/prop (14b)<br>W12 | L/c/d (14c) | (14d)     |         |                                    |       |                      |       |       |                          |        |        |  |        |        |                  |       |       |                     |       |       |                            |  |           |       |   |       |       |            |        |                     |  |
|                               |                                   |                 |                 |                     | 14/15                     | 15/16       | 13/14        | 14/15          | 15/16                                | 15/16        | 13/14        | 14/15          | 15/16                | 13/14       | 14/15     | 15/16   | 13/14                              | 14/15 | 15/16                | 13/14 | 14/15 | 12/13                    | 13/14  | 14/15  | 13/14                                      | 14/15  | 15/16  | 12/13            | 13/14 | 14/15 | 12/13               | 13/14 | 14/15 |                            | 13/14                                  | 14/15     | 13/14 | 14/15   | 14/15 | 14/15 | (15)<br>C4 |        |                     |  |
|                               | Sydney Water                      | Two Part        | Two Part        | 127                 | 114                       | 103         |              | All            | All                                  | All          | 221          | 223            | 228                  |             |           | 100     | 100                                |       |                      |       | 581   | 563                      | 562    |        | 1.9  | 1.9    | 2.3    | 79               | 80    | 206   | 201                 | 206   | 201   |                            | Y                                      | 1,876,000 |       |   |       |       |            |        |                     |  |
|                               | Hunter Water                      | Two Part        | Two Part        | 17                  | 18                        | 18          |              | All            | All                                  | All          | 217          | 219            | 222                  |             |           | 100     | 100                                |       |                      |       | 409   | 385                      | 390    |        | 2.8  | 3.5    | 2.5    | 96               | 95    | 181   | 168                 | 181   | 168   |                            | Y                                      | 238,800   |       |   |       |       |            |        |                     |  |
| LWUs with > 10,000 Properties |                                   |                 |                 |                     |                           |             |              |                |                                      |              |              |                |                      |             |           |         |                                    |       |                      |       |       |                          |        |        |  |        |        |                  |       |       |                     |       |       |                            |  |           |       |   |       |       |            |        |                     |  |
| 1                             | Gosford                           | Two Part        | Two Part        | 126                 | 150                       | 174         |              | All            | All                                  | All          | 217          | 223            | 226                  |             |           | 100     | 100                                | 170   | 156                  | 151   | 1,310 | 2,320                    | 2,370  | 475    | 507  | 536    | -0.2   | 0.0              | 0.4   | 0.7   | 0.8                 | 1.3   | 76    | 73                         | 161                                    | 160       | 161   | 160   | 180   | Y     | 71,830     |        |                     |  |
| 2                             | Wyong                             | Two Part        | Two Part        | 170                 | 172                       | 167         |              | All            | All                                  | All          | 217          | 223            | 226                  |             |           | 100     | 100                                | 131   | 117                  | 118   | 2,840 | 3,570                    | 3,620  | 518    | 508  | 507    | -0.2   | 0.0              | 0.4   | 1.2   | 1.4                 | 1.5   | 67*   | 67*                        | 157                                    | 150       | 158   | 150   | 160   | Y     | 63,490     |        |                     |  |
| 3                             | Shoalhaven                        | Two Part        | Two Part        | 81                  | 81                        | 80          |              | All            | All                                  | All          | 160          | 160            | 165                  |             |           | 100     | 100                                | 92    | 87                   | 92    | 6,580 | 6,580                    | 6,580  | 317    | 309  | 315    | 2.0    | 1.6              | 2.3   | 1.2   | 0.9                 | 1.7   | 74    | 75*                        | 147                                    | 142       | 148   | 143   | 193   | Y     | 47,150     |        |                     |  |
| 4                             | Rous (Bulk Supplier) (No Sge)     |                 |                 |                     |                           |             |              |                |                                      |              |              |                |                      |             |           |         | 96                                 | 96    | 99                   | 8,860 | 9,090 | 9,250                    |        |        |  | 0.8    | 1.2    | 1.3              | 1.1   | 1.7   | 1.8                 |       |       |                            |  |           | Y     | 41,230  |       |       |            |        |                     |  |
| 5                             | MidCoast                          | Inclining Block | Inclining Block | 180                 | 205                       | 215         |              | <200           | <200                                 | <200         | 257          | 270            | 292                  | >200        | >200      | >200    | 288                                | 302   | 326                  | 97    | 97    | 190                      | 166    | 202    | 5,820                                      | 5,980  | 6,160  | -1.5             | -0.7  | -0.9  | 0.1                 | 0.7   | 0.7   | 75                         | 72                                     | 150       | 142   | 150   | 142   | 169   | Y          | 38,710 |                     |  |
| 6                             | Tweed                             | Inclining Block | Inclining Block | 138                 | 148                       | 159         |              | <300           | <300                                 | <300         | 225          | 245            | 270                  | >300        | >300      | >300    | 340                                | 370   | 405                  | 100   | 100   | 149                      | 138    | 147    | 12,580                                     | 12,910 | 13,130 | -0.2             | 1.7   | 0.9   | 0.6                 | 2.4   | 1.6   | 77                         | 75*                                    | 184       | 178   | 184   | 178   | 192   | Y          | 32,240 |                     |  |
| 7                             | Port Macquarie-Hastings (Unfiltre | Inclining Block | Inclining Block | 173                 | 183                       | 194         |              | <270           | <270                                 | <270         | 241          | 255            | 270                  | >270        | >270      | >270    | 482                                | 510   | 540                  | 33    | 33    | 168                      | 172    | 181    | 9,760                                      | 9,800  | 9,550  | -0.2             | 1.8   | 1.6   | -0.5                | 1.7   | 1.2   | 69*                        | 68                                     | 157       | 151   | 157   | 151   | 142   | Y          | 30,420 |                     |  |
| 8                             | Riverina (Groundwater) (No Sge)   | Inclining Block | Inclining Block | 140                 | 160                       | 160         |              | <500           | <500                                 | <500         | 121          | 133            | 140                  | >500        | >500      | >500    | 183                                | 200   | 210                  | 100   | 100   | 71                       | 63     | 52     | 4,800                                      | 4,930  | 5,920  | 3.6              | 5.6   | 7.9   | 3.5                 | 5.3   | 7.5   | 76                         | 74                                     | 324       | 311   | 324   | 311   | 326   | Y          | 29,870 |                     |  |
| 10                            | Coffs Harbour                     | Inclining Block | Inclining Block | 139                 | 143                       | 143         |              | <365           | <365                                 | <365         | 255          | 263            | 267                  | >365        | >365      | >365    | 383                                | 395   | 401                  | 100   | 100   | 146                      | 149    | 161    | 9,680                                      | 9,940  | 10,130 | 0.6              | -0.2  | 0.6   | 1.8                 | 1.2   | 2.0   | 76*                        | 76*                                    | 169       | 167   | 169   | 167   | 150   | Y          | 25,060 |                     |  |
| 11                            | Albury City                       | Inclining Block | Inclining Block | 94                  | 113                       | 128         |              | <225           | <225                                 | <225         | 107          | 118            | 130                  | >225        | >225      | >225    | 206                                | 216   | 227                  | 100   | 100   | 92                       | 86     | 87     | 3,400                                      | 3,000  | 3,050  | 0.8              | 1.9   | 2.2   | 0.7                 | 1.7   | 1.9   | 79                         | 75                                     | 232       | 205   | 232   | 205   | 260   | Y          | 25,700 |                     |  |
| 12                            | Fish River WS (Bulk Supplier) (N  |                 |                 | MAQ                 | MAQ                       | MAQ         |              |                |                                      |              |              |                |                      |             |           |         |                                    |       |                      |       |       |                          |        |        |  |        |        | 10.9             | 15.6  | 10.9  | 15.6                |       |       |                            |  |           | Y*    | 23,500  |       |       |            |        |                     |  |
| 13                            | Tamworth Regional                 | Inclining Block | Inclining Block | 242                 | 248                       | 254         |              | <400           | <400                                 | <400         | 138          | 142            | 145                  | 400-800     | 400-800   | 400-800 | 207                                | 213   | 218                  | 80    | 80    | 110                      | 105    | 131    | 4,510                                      | 4,630  | 4,710  | 1.9              | 3.6   | 2.3   | 1.5                 | 3.3   | 2.0   | 64                         | 55                                     | 287       | 188   | 287   | 188   | 223   | Y          | 21,680 |                     |  |
| 14                            | Clarence Valley                   | Inclining Block | Inclining Block | 156                 | 149                       | 177         |              | <450           | <450                                 | <450         | 168          | 179            | 191                  | >450        | >450      | >450    | 252                                | 268   | 287                  | 95    | 95    | 137                      | 121    | 133    | 4,990                                      | 5,120  | 5,210  | -0.5             | 0.2   | -0.1  | -0.1                | 0.7   | 0.4   | 67                         | 66                                     | 161       | 147   | 161   | 147   | 167   | Y          | 21,460 |                     |  |
| 15                            | Eurobodalla                       | Two Part        | Two Part        | 228                 | 282                       | 289         |              | All            | All                                  | All          | 340          | 340            | 348                  |             |           |         | 98                                 | 98    | 213                  | 229   | 225   | 11,290                   | 11,590 | 11,780 | 631  | 668    | 684    | -0.5             | 0.3   | 1.0   | -0.3                | 0.4   | 1.1   | 64                         | 58                                     | 119       | 114   | 119   | 114   | 184   | Y          | 19,580 |                     |  |
| 16                            | Wingecarribee                     | Inclining Block | Inclining Block | 148                 | 154                       | 158         |              | <225           | <225                                 | <225         | 163          | 174            | 178                  | >225        | >225      | >225    | 245                                | 261   | 267                  | 80    | 80    | 129                      | 108    | 130    | 6,310                                      | 6,480  | 6,540  | 0.9              | 2.1   | 1.8   | 0.7                 | 1.8   | 1.5   | 69                         | 68                                     | 200       | 178   | 200   | 178   | 209   | Y          | 19,150 |                     |  |
| 17                            | Queanbeyan (Reticulator)          | Inclining Block | Inclining Block | 348                 | 381                       | 417         |              | <160           | <160                                 | <176         | 250          | 274            | 297                  | >160        | >160      | >176    | 367                                | 402   | 456                  | 100   | 100   | 212                      | 120    | 133    | 8,290                                      | 8,500  | 8,610  | -0.7             | 1.1   | 0.8   | -0.9                | 0.9   | 0.4   | 64                         | 61                                     | 178       | 173   | 178   | 173   | 198   | Y          | 17,350 |                     |  |
| 18                            | Dubbo                             | Two Part        | Two Part        | 228                 | 242                       | 250         |              | All            | All                                  | All          | 174          | 185            | 191                  |             |           |         | 100                                | 100   | 81                   | 97    | 99    | 5,340                    | 5,450  | 5,490  | 836  | 848    | 875    | 2.1              | 2.6   | 4.4   | 2.9                 | 3.3   | 5.0   | 75                         | 74                                     | 350       | 327   | 350   | 327   | 396   | Y          | 17,590 |                     |  |
| 19                            | Orange                            | Inclining Block | Inclining Block | 201                 | 222                       | 252         |              | <450           | <450                                 | <450         | 184          | 202            | 220                  | >450        | >450      | >450    | 278                                | 303   | 330                  |       |       | 100                      | 92     | 81     | 7,320                                      | 7,490  | 7,560  | 4.3              | 3.3   | 4.4   | 3.7                 | 2.9   | 4.0   | 71                         | 70                                     | 174       | 170   | 174   | 170   | 180   | Y          | 17,520 |                     |  |
| 20                            | Goulburn Mulwaree                 | Inclining Block | Inclining Block | 157                 | 165                       | 170         | 40           | <292           | <292                                 | <292         | 271          | 280            | 280                  | >292        | >292      | >292    | 365                                | 378   | 378                  | 25    | 25    | 143                      | 143    | 174    | 4,170                                      | 3,370  | 3,370  | 0.6              | 0.7   | 0.4   | 1.0                 | 1.0   | 0.8   | 66*                        | 65*                                    | 165       | 139   | 165   | 139   | 171   | Y          | 11,190 |                     |  |
| 21                            | Bathurst Regional                 | Inclining Block | Inclining Block | 116                 | 121                       | 156         |              | <250           | <250                                 | <250         | 171          | 180            | 180                  | >250        | >250      | >250    | 257                                | 270   | 270                  |       |       | 111                      | 118    | 122    | 4,950                                      | 5,100  | 5,400  | 1.1              | 2.0   | 1.7   | 0.9                 | 1.8   | 1.6   | 83                         | 82                                     | 227       | 223   | 227   | 225   | 259   | Y          | 15,720 |                     |  |
| 22                            | Lismore (Reticulator)             | Two Part        | Two Part        | 185                 | 204                       | 234         |              | All            | All                                  | All          | 272          | 299            | 322                  |             |           |         | 75                                 | 75    | 228                  | 124   | 122   | 2,020                    | 2,910  | 3,050  | 606  | 666    | 732    | -0.8             | -0.1  | 1.3   | -0.9                | 0.2   | 1.6   | 70                         | 70                                     | 155       | 155   | 155   | 155   | 170   | Y          | 14,320 |                     |  |
| 23                            | Bega Valley (Unfiltered)          | Two Part        | Two Part        | 193                 | 198                       | 203         |              | All            | All                                  | All          | 243          | 250            | 270                  |             |           |         | 99                                 | 99    | 167                  | 193   | 225   | 7,500                    | 7,910  | 8,040  | 520  | 541    | 574    | -1.1             | -0.3  | -0.5  | -1.4                | -0.6  | -0.8  | 63                         | 65*                                    | 134       | 137   | 134   | 137   | 202   | Y*         | 14,360 |                     |  |
| 24                            | Ballina (Reticulator)             | Inclining Block | Inclining Block | 178                 | 189                       | 195         |              | <350           | <350                                 | <350         | 191          | 202            | 208                  | >350        | >350      | >350    | 287                                | 304   | 313                  | 100   | 100   | 196                      | 89     | 84     | 4,510                                      | 3,540  | 3,160  | -0.2             | 0.7   | 1.8   | -0.7                | 0.3   | 1.2   | 68                         | 66                                     | 194       | 181   | 194   | 181   | 170   | Y          | 14,360 |                     |  |
| 25                            | Kempsey (Groundwater)             | Inclining Block | Inclining Block | 248                 | 255                       | 268         |              | <250           | <250                                 | <250         | 203          | 209            | 219                  | >250        | >250      | >250    | 292                                | 301   | 316                  | 7     |       |                          |        |        |  |        |        |                  |       |       |                     |       |       |                            |  |           |       |   |       |       |            |        |                     |  |



## Table 6: Water supply - residential charges, bills & cost recovery

| WATER UTILITY |                          | RESIDENTIAL CHARGES |                           |                   |          |                |                                      |                   |      |                   |                         |                   |        |                   |                                    |             |                      |                   |     | COST RECOVERY            |                   |     |  |                   |       |                                  |                   |      |                     |                   |      |  |             |   |                                  |      |           | Total Connected Properties |                       |     |                   |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               |                          | Type of Tariff      | Fixed Charge (or Minimum) |                   |          | Special Levies | Usage Charge (for Step 1 and Step 2) |                   |      |                   |                         |                   |        |                   | Billing (2006 National Guidelines) |             | Operating Cost (OMA) |                   |     | Typical Developer Charge |                   |     | Typical Residential Bill based on Col(14b) |                   |       | Return on Assets                 |                   |      | ERRR (Water Supply) |                   |      | Residential Revenue from Usage Charges |             | Avge Annual Residential Water Supplied <sup>3</sup> |                                  |      |           |                            | Full Cost Recovery?   |     |                   |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                          |                     |                           |                   |          |                |                                      |                   |      |                   |                         |                   |        |                   |                                    |             |                      |                   |     |                          |                   |     |  |                   |       |                                  |                   |      |                     |                   |      |  |             |   |                                  |      |           |                            |                       |     |                   |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                          |                     | Step 1                    |                   |          |                | Step 2                               |                   |      |                   | (% Implementation) (5e) |                   | (c/kL) | (\$/ET)           |                                    |             |                      |                   |     |                          |                   |     |  |                   |       | (Includes Special Levies) (8) P3 |                   |      | %                   |                   |      | %                                      |             |   | (% of residential bills) (13) F4 |      | Potable   |                            | Potable + Non Potable |     | (FCR) (Y/Y*/N)    |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                          |                     | (1) P1                    |                   | (2) P1.2 |                | (4) P1.12                            | (5a) P1.3         |      | (5b) P1.3         |                         | (5c) P1.4         |        |                   |                                    |             |                      |                   |     |                          |                   |     |  |                   |       |                                  |                   |      |                     |                   |      |  |             |   |                                  |      | (5d) P1.4 |                            | kL/prop (14a)         |     | kL/prop (14b) W12 |     | L/c/d (14c) | (14d) |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                          | 14/15 15/16         |                           | 13/14 14/15 15/16 |          |                | 15/16                                | 13/14 14/15 15/16 |      | 13/14 14/15 15/16 |                         | 13/14 14/15 15/16 |        | 13/14 14/15 15/16 |                                    | 13/14 14/15 |                      | 12/13 13/14 14/15 |     |                          | 13/14 14/15 15/16 |     |  | 13/14 14/15 15/16 |       |                                  | 12/13 13/14 14/15 |      |                     | 12/13 13/14 14/15 |      |  | 13/14 14/15 |   | 13/14 14/15 14/15                |      | 14/15     | 14/15                      |                       |     |                   |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 43            | Tumut                    | Inclining Block     | Two Part                  | 221               | 227      | 130            |                                      | <300              | <300 | All               | 123                     | 126               | 211    | >300              | >300                               |             | 246                  | 252               | 50  | 100                      | 113               | 118 | 134  | 5,500             | 5,640 | 5,790                            | 487               | 503  | 591                 | 0.5               | -0.4 | 0.0                                    | 1.2         | 1.2   | 0.4                              | 58   | 78*       | 216                        | 219                   | 225 | 220               | 277 | Y           | 4,500 |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44            | Gunnedah (Groundwater)   | Inclining Block     | Inclining Block           | 170               | 170      | 170            |                                      | <400              | <400 | <400              | 100                     | 104               | 108    | >400              | >400                               | >400        | 150                  | 156               | 162 |                          | 72                | 64  | 66   | 8,200             | 8,490 | 8,700                            | 570               | 628  | 645                 | 2.6               | 4.4  | 4.1                                    | 1.6         | 3.6   | 3.3                              | 75   | 74*       | 400                        | 427                   | 400 | 427               | 461 | Y           | 4,350 |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 45            | Upper Hunter             | Inclining Block     | Inclining Block           | 300               | 258      | 217            |                                      | <300              | <300 | <300              | 159                     | 175               | 192    | >300              | >300                               | >300        | 228                  | 262               | 307 | 100                      | 100               | 108 | 123  | 107               | 7,650 | 6,920                            | 7,100             | 1005 | 798                 | 811               | 4.9  | 2.0                                    | 5.1         | 4.8   | 2.0                              | 5.1  | 75*       | 73*                        | 400                   | 306 | 400               | 306 | 259         | Y     | 4,400 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 46            | Narrabri (Groundwater)   | Two Part            | Two Part                  | 293               | 323      | 333            |                                      | All               | All  | All               | 83                      | 87                | 90     |                   |                                    |             |                      |                   |     |                          | 70                | 71  | 81   | 3,360             | 3,460 | 3,500                            | 607               | 591  | 610                 | 13.0              | 8.7  | 4.2                                    | 8.6         | 6.8   | 2.6                              | 62   | 56        | 378                        | 308                   | 378 | 308               | 268 | Y           | 4,390 |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 47            | Bellingen (Unfiltered)   | Inclining Block     | Inclining Block           | 131               | 112      | 117            |                                      | <365              | <365 | <365              | 175                     | 152               | 163    | >365              | >365                               | >365        | 263                  | 228               | 245 | 85                       | 85                | 109 | 109  | 140               | 6,300 | 6,300                            | 6,300             | 417  | 343                 | 365               | 1.0  | 2.3                                    | 0.9         | 0.3   | 1.4                              | -0.3 | 77        | 77                         | 163                   | 152 | 163               | 152 | 154         | Y     | 4,090 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48            | Leeton                   | Inclining Block     | Inclining Block           | 246               | 252      | 264            |                                      | <300              | <300 | <300              | 84                      | 86                | 91     | 300-600           | 300-600                            | 300-600     | 123                  | 126               | 133 |                          | 85                | 89  | 83   | 4,500             | 4,600 | 4,600                            | 663               | 675  | 712                 | 1.5               | 0.3  | 1.1                                    | 0.7         | -0.4  | 0.4                              | 65   | 66        | 434                        | 431                   | 434 | 431               | 465 | Y           | 4,080 |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 49            | Young (Reticulator)      | Inclining Block     | Two Part                  | 225               | 250      | 275            |                                      | <480              | <480 | All               | 230                     | 246               | 270    | >480              | >480                               |             | 345                  | 369               |     | 50                       | 50                | 83  | 67   | 59                | 1,050 | 1,100                            | 3,370             | 623  | 659                 | 723               | -1.2 | -1.8                                   | -0.2        | -1.8  | -2.0                             | -0.7 | 66        | 69                         | 173                   | 166 | 173               | 166 | 196         | Y*    | 4,880 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50            | Cooma-Monaro             | Inclining Block     | Inclining Block           | 300               | 315      | 331            |                                      | <300              | <300 | <300              | 147                     | 154               | 162    | >300              | >300                               | >300        | 232                  | 244               | 256 | 100                      | 100               | 155 | 182  | 129               | 6,650 | 6,780                            | 6,850             | 668  | 872                 | 917               | 0.8  | 0.5                                    | 1.1         | 0.5   | 0.2                              | 0.8  | 55*       | 64*                        | 250                   | 339 | 250               | 339 | 404         | Y     | 3,670 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 51            | Forbes                   | Two Part            | Two Part                  | 201               | 206      | 211            |                                      | <600              | All  | All               | 77                      | 90                | 103    | >600              |                                    |             | 113                  |                   |     | 40                       | 50                | 78  | 75   | 79                | 6,460 | 6,620                            | 6,780             | 477  | 523                 | 573               | -0.1 | -1.0                                   | -0.8        | -1.1  | -1.7                             | -1.6 | 63        | 66                         | 359                   | 352 | 359               | 352 | 408         | Y*    | 3,720 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 52            | Snowy River (Unfiltered) | Inclining Block     | Inclining Block           | 360               | 360      | 363            |                                      | <300              | <300 | <300              | 200                     | 210               | 230    | >300              | >300                               | >300        | 325                  | 330               | 350 | 99                       | 99                | 248 | 214  | 254               | 4,000 | 6,500                            | 9,560             | 546  | 534                 | 553               | 0.6  | 1.3                                    | 1.2         | 0.3   | 1.1                              | 1.0  | 42        | 41                         | 93                    | 83  | 93                | 83  | 252         | Y     | 5,310 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 53            | Berrigan (Dual Supply)   | Two Part            | Two Part                  | 461               | 474      | 497            |                                      | All               | All  | All               | 94                      | 94                | 94     |                   |                                    |             |                      |                   |     | 25                       | 30                | 86  | 63   | 65                | 5,500 | 5,600                            | 5,750             | 773  | 775                 | 798               | 2.7  | 2.9                                    | 3.6         | 2.4   | 2.6                              | 3.2  | 49*       | 40                         | 237                   | 241 | 427               | 399 | 492         | Y     | 3,540 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 53            | Berrigan (Non Potable)   | Two Part            | Two Part                  |                   |          |                |                                      | All               | All  | All               | 47                      | 47                | 47     |                   |                                    |             |                      |                   |     |                          |                   |     |  |                   |       |                                  |                   |      |                     |                   |      |  |             |   |                                  |      |           |                            |                       |     |                   |     |             |       |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### *LWUs with 1,501 - 3,000 Properties*

|   |                           |                 |                 |     |     |     |  |      |      |      |     |     |     |         |         |         |     |     |     |     |     |     |     |     |        |        |        |      |      |      |      |       |      |      |       |      |     |     |     |     |      |      |     |                   |       |       |       |
|---|---------------------------|-----------------|-----------------|-----|-----|-----|--|------|------|------|-----|-----|-----|---------|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|--------|--------|--------|------|------|------|------|-------|------|------|-------|------|-----|-----|-----|-----|------|------|-----|-------------------|-------|-------|-------|
| 57  | Wellington                | Inclining Block | Inclining Block | 358 | 366 | 377 |  | <300 | <300 | <300 | 193 | 197 | 203 | 300-500 | 300-500 | 300-500 | 196 | 201 | 207 | 100 | 100 | 162 | 163 | 112 | 4,600  | 4,600  | 4,500  | 730  | 785  | 809  | 2.6  | 3.3   | 4.6  | 4.1  | 4.6   | 5.7  | 55  | 66  | 193 | 213 | 193  | 213  | 227 | Y                 | 2,910 |       |       |
| 58  | Cootamundra (Reticulator) | Two Part        | Two Part        | 302 | 312 | 320 |  | All  | All  | All  | 178 | 184 | 193 |         |         |         |     |     |     | 30  | 30  | 72  | 46  | 70  | 6,160  | 6,470  | 6,790  | 686  | 662  | 687  | 1.9  | 4.3   | -1.6 | 1.9  | 4.3   | -1.6 | 56* | 53* | 216 | 190 | 216  | 190  | 248 | Y*                | 3,010 |       |       |
| 59  | Lachlan                   | Inclining Block | Inclining Block | 288 | 308 | 355 |  | <450 | <450 | <600 | 190 | 203 | 220 | >450    | >450    | >600    | 285 | 305 | 330 | 100 | 100 | 111 | 115 | 111 | 5,800  | 5,800  | 5,800  | 1401 | 1427 | 1493 | -0.3 | -0.7  | -0.7 | -0.8 | -1.2  | -1.0 | 79* | 78  | 541 | 517 | 554  | 531  | 584 | Y*                | 2,840 |       |       |
| 60  | Glen Innes Severn         | Inclining Block | Inclining Block | 260 | 270 | 284 |  | <450 | <450 | <450 | 198 | 205 | 215 | >450    | >450    | >450    | 298 | 308 | 323 |     |     | 190 | 220 | 233 | 2,720  | 2,790  | 2,860  | 551  | 539  | 566  | 0.0  | 0.3   | 0.3  | 0.7  | 1.2   | 1.2  | 53  | 52  | 147 | 131 | 147  | 131  | 151 | Y                 | 3,050 |       |       |
| 61  | Liverpool Plains          | Inclining Block | Inclining Block | 559 | 575 | 690 |  | <300 | <300 | <300 | 120 | 125 | 128 | >300    | >300    | >300    | 197 | 203 | 208 | 50  | 50  | 153 | 193 | 176 | 10,690 | 10,690 | 10,990 | 791  | 812  | 933  | 1.3  | 1.3   | 0.5  | 1.1  | 1.3   | 0.5  | 44  | 41  | 193 | 190 | 193  | 190  | 233 | Y                 | 2,760 |       |       |
| 62  | Narromine (Groundwater)   | Two Part        | Two Part        | 183 | 193 | 203 |  | All  | All  | All  | 105 | 110 | 115 |         |         |         |     |     |     | 92  | 93  | 65  | 77  | 99  | 4,380  | 4,500  | 4,590  | 700  | 690  | 723  | 5.4  | 6.5   | 4.4  | 3.7  | 4.8   | 2.8  | 74  | 74  | 493 | 452 | 493  | 452  | 451 | Y                 | 2,120 |       |       |
| 63  | Narrandera (Groundwater)  | Two Part        | Two Part        | 258 | 266 | 273 |  | All  | All  | All  | 99  | 102 | 102 |         |         |         |     |     |     |     |     | 59  | 44  | 53  | 1,000  | 1,750  | 1,800  | 752  | 957  | 964  | 12.7 | 8.4   | 6.3  | 9.6  | 5.5   | 3.9  | 66* | 72  | 499 | 678 | 499  | 678  | 742 | Y                 | 2,090 |       |       |
| 65  | Murray (Dual Supply)      | Two Part        | Two Part        | 250 | 262 | 275 |  | All  | All  | All  | 87  | 91  | 96  |         |         |         |     |     |     |     |     | 77  | 111 | 111 | 2,730  | 2,810  | 2,890  | 568  | 590  | 619  | 3.7  | 4.4   | 4.7  | 3.6  | 4.3   | 4.6  | 56* | 51  | 172 | 168 | 287  | 280  | 304 | Y                 | 3,050 |       |       |
| 66  | Murray (Non Potable)      | Two Part        | Two Part        | 92  | 97  | 102 |  | All  | All  | All  | 66  | 69  | 72  |         |         |         |     |     |     |     |     |     |     |     |        |        |        |      |      |      |      |       |      |      |       |      |     |     |     |     |      |      |     |                   | 3,050 |       |       |
| 67  | Cobar                     | Inclining Block | Inclining Block | 227 | 233 | 240 |  | <450 | <450 | <450 | 200 | 205 | 210 | 450-550 | 450-550 | 450-550 | 290 | 300 | 310 |     |     | 158 | 224 | 242 | 1,160  | 1,160  | 1,160  | 992  | 935  | 959  | 2.6  | -0.1  | 14.8 | 2.6  | -0.2  | 14.7 | 79  | 77  | 382 | 342 | 464  | 342  | 300 | Y                 | 2,260 |       |       |
| 66  | Cobar WB                  |                 |                 |     |     |     |  |      |      |      |     |     |     |         |         |         |     |     |     |     | 58  | 69  | 713 |     |        |        |        |      |      |      |      |       |      |      |       |      |     |     |     |     |      |      |     |                   | 0     |       |       |
| 68  | Tenterfield               | Inclining Block | Inclining Block | 379 | 398 | 438 |  | <450 | <450 | <450 | 197 | 207 | 228 | >450    | >450    | >450    | 227 | 238 | 262 |     |     | 222 | 213 | 229 | 5,500  | 5,000  | 5,400  | 675  | 695  | 765  | -0.8 | 1.8   | 0.2  | -0.7 | 1.8   | 0.1  | 44* | 44  | 150 | 143 | 150  | 143  | 184 | Y                 | 1,990 |       |       |
| 70  | Kyogle                    | Inclining Block | Inclining Block | 321 | 340 | 344 |  | <200 | <200 | <200 | 120 | 130 | 150 | >200    | >200    | >200    | 180 | 180 | 190 | 90  | 90  | 236 | 197 | 209 | 2,570  | 2,850  | 3,170  | 492  | 528  | 561  | -0.1 | -1.6  | 0.4  | 0.1  | -1.4  | 0.6  | 42  | 41  | 143 | 145 | 143  | 145  | 178 | Y                 | 1,910 |       |       |
| 71  | Palerang                  | Inclining Block | Inclining Block | 397 | 407 | 422 |  | <200 | <200 | <200 | 208 | 214 | 222 | >200    | >200    | >200    | 328 | 337 | 349 | 100 | 100 | 238 | 233 | 234 | 9,000  | 9,330  | 9,680  | 732  | 745  | 773  | 0.9  | 0.3   | 1.0  | 0.8  | 0.8   | 1.4  | 50  | 47  | 161 | 158 | 161  | 158  | 165 | Y                 | 2,240 |       |       |
| 73  | Upper Lachlan             | Inclining Block | Inclining Block | 393 | 413 | 430 |  | <200 | <200 | <200 | 240 | 256 | 269 | >200    | >200    | >200    | 318 | 339 | 356 | 90  | 90  | 211 | 269 | 297 | 3,700  | 3,700  | 3,800  | 722  | 779  | 815  | 5.2  | 1.7   | -0.8 | 4.5  | 1.7   | -0.7 | 54  | 47* | 137 | 143 | 137  | 143  | 236 | Y*                | 1,990 |       |       |
| 74  | Wentworth (Dual Supply)   | Inclining Block | Inclining Block | 260 | 265 | 270 |  | <250 | <250 | <250 | 120 | 120 | 120 | >250    | >250    | >250    | 280 | 280 | 280 |     |     | 122 | 105 | 80  | 2,400  | 2,520  | 2,520  | 617  | 686  | 696  | 5.0  | 4.6   | 4.2  | 4.5  | 4.7   | 4.6  | 58* | 48  | 74  | 99  | 407  | 504  | 779 | Y                 | 2,320 |       |       |
| 74  | Wentworth (Non Potable)   | Inclining Block | Inclining Block | 135 | 140 | 145 |  | <700 | <700 | <700 | 40  | 40  | 40  | >700    | >700    | >700    | 110 | 110 | 110 |     |     |     |     |     |        |        |        |      |      |      |      |       |      |      |       |      |     |     |     |     |      |      |     |                   |       | 2,320 |       |
| 75  | Coonamble (Groundwater)   | Inclining Block | Inclining Block | 145 | 170 | 210 |  | <370 | <370 | <370 | 49  | 55  | 70  | >370    | >370    | >370    | 74  | 90  | 110 |     |     | 67  | 52  | 58  | 670    | 880    | 900    | 348  | 583  | 725  | 2.3  | 0.3   | -1.1 | 0.9  | -0.8  | -1.7 | 63  | 71* | 399 | 603 | 399  | 603  | 604 | Y*                | 1,680 |       |       |
| 76  | Harden (Reticulator)      | Inclining Block | Inclining Block | 350 | 358 | 367 |  | <450 | <450 | <450 | 210 | 215 | 220 | >450    | >450    | >450    | 314 | 321 | 329 | 90  | 90  | 62  | 33  | 92  | 3,310  | 1,290  | 1,360  | 1308 | 747  | 765  | 0.7  | 1.2   | -0.3 | 0.5  | 1.0   | -0.8 | 73* | 52  | 454 | 181 | 454  | 181  | 163 | Y                 | 1,770 |       |       |
| 79  | Walgett (Dual Supply)     | Inclining Block | Inclining Block | 411 | 423 | 455 |  | <500 | <500 | <500 | 35  | 36  | 76  | >500    | >500    | >500    | 49  | 50  | 106 |     |     | 36  | 99  | 30  |        |        |        | 1174 | 1212 | 1682 | -1.1 | -12.8 | 5.1  | -0.9 | -12.0 | 5.1  | 65* | 57* | 720 | 720 | 1341 | 1341 | 910 | Y                 | 1,930 |       |       |
| 79  | Walgett (Non Potable)     | Inclining Block | Inclining Block | 411 | 423 | 455 |  | <600 | <600 | <600 | 11  | 12  | 25  | >600    | >600    | >600    | 16  | 17  | 36  |     |     |     |     |     |        |        |        |      |      |      |      |       |      |      |       |      |     |     |     |     |      |      |     |                   |       |       | 1,930 |
| 80  | Greater Hume              | Inclining Block | Inclining Block | 280 | 308 | 339 |  | <200 | <200 | <200 | 140 | 140 | 160 | >200    | >200    | >200    | 220 | 220 | 240 | 75  | 75  | 144 | 90  | 92  | 2,870  | 2,960  | 3,050  | 636  | 685  | 764  | -0.1 | -0.5  | -0.2 | -0.4 | -0.8  | -0.5 | 60  | 59  | 235 | 244 | 235  | 244  | 207 | Y*                | 1,860 |       |       |
| Medians (% of LWUs basis) for 1,500 to 3,000 Properties |                           |                 |                 | 295 | 310 | 342 |  |      |      |      | 159 | 162 | 177 |         |         |         | 254 | 259 | 271 |     |     | 133 | 113 | 111 | 3,310  | 2,960  | 3,170  | 711  | 720  | 765  | 1.6  | 1.3   | 0.5  | 1.0  | 1.3   | 0.9  | 54  | 52  | 205 | 190 | 261  | 228  | 242 | 0 LWU without FCR |       |       |       |

### *LWUs with 200 - 1,500 Properties*

|    |                         |                 |                 |     |     |     |  |      |      |      |     |     |     |      |      |      |     |     |     |     |     |     |     |     |       |       |       |     |     |     |      |      |     |      |      |     |     |     |     |     |      |      |      |   |       |
|----|-------------------------|-----------------|-----------------|-----|-----|-----|--|------|------|------|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-----|-----|-----|------|------|-----|------|------|-----|-----|-----|-----|-----|------|------|------|---|-------|
| 81 | Gwydir                  | Inclining Block | Inclining Block | 390 | 390 | 390 |  | <600 | <600 | <600 | 120 | 125 | 125 | >600 | >600 | >600 | 195 | 195 | 195 | 25  | 25  | 112 | 66  | 97  | 2,000 | 2,000 | 2,000 | 861 | 790 | 790 | 1.7  | 4.5  | 1.3 | 3.0  | 6.0  | 3.0 | 75  | 76  | 393 | 320 | 393  | 320  | 430  | Y | 1,470 |
| 83 | Oberon (Reticulator)    | Two Part        | Two Part        | 265 | 292 | 330 |  | All  | All  | All  | 193 | 213 | 280 |      |      |      |     |     |     |     |     | 193 | 86  | 60  | 1,310 | 1,350 | 1,390 | 536 | 606 | 743 | -0.4 | -0.8 | 2.1 | -0.4 | -0.5 | 2.2 | 57  | 75  | 140 | 148 | 140  | 148  | 139  | Y | 1,300 |
| 84 | Gilgandra (Groundwater) | Two Part        | Two Part        | 212 | 219 | 233 |  | All  | All  | All  | 95  | 98  | 104 |      |      |      |     |     |     | 10  | 10  | 50  | 69  | 62  |       |       |       | 664 | 730 | 775 | 1.5  | 1.4  | 1.0 | 0.8  | 0.8  | 0.4 | 68* | 70  | 476 | 521 | 492  | 525  | 507  | Y | 1,350 |
| 85 | Uralla                  | Two Part        | Two Part        | 283 | 295 | 305 |  | All  | All  | All  | 200 | 210 | 220 |      |      |      |     |     |     | 100 | 100 | 222 | 199 | 174 |       |       |       | 880 | 910 | 930 | -0.1 | 0.4  | 1.1 | -0.8 | 0.1  | 0.8 | 59  | 57* | 199 | 185 | 199  | 185  | 228  | Y | 1,450 |
| 86 | Hay (Dual Supply)       | Inclining Block | Inclining Block | 126 | 129 | 132 |  | <300 | <300 | <300 | 106 | 108 | 110 | >300 | >300 | >300 | 160 | 164 | 165 |     |     | 62  | 59  | 53  |       |       |       | 886 | 921 | 944 | -0.1 | -0.5 | 1.0 | -0.4 | -0.7 | 0.8 | 86* | 57  | 155 | 159 | 1019 | 1048 | 1407 | Y | 1,330 |



Table 6: Water supply - residential charges, bills & cost recovery

| WATER UTILITY |                      | RESIDENTIAL CHARGES |                           |                |                                      |                |                         |         |           |                |           |          |                                    |                  |                             |  | Operating Cost (OMA) | Typical Developer Charge | Typical Residential Bill based on Col(14b) | COST RECOVERY                                       |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               |                      | Type of Tariff      | Fixed Charge (or Minimum) | Special Levies | Usage Charge (for Step 1 and Step 2) |                |                         |         |           |                |           |          | Billing (2006 National Guidelines) | Return on Assets | ERRR (Water Supply)         | Residential Revenue from Usage Charges |                      |                          |  | Avge Annual Residential Water Supplied <sup>3</sup> |         |         |     |     | Full Cost Recovery? | Total Connected Properties |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                      |                     |                           |                | Step 1                               |                |                         |         | Step 2    |                |           |          |                                    |                  |                             |  |                      |                          |  | (FCCR) (Y/Y*/N)                                     |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                      |                     |                           |                | Step (kL)                            | Charges (c/kL) |                         |         | Step (kL) | Charges (c/kL) |           |          |                                    |                  |                             |  |                      |                          |  |   |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                      |                     |                           |                |                                      | (5a) P1.3      | (5b) P1.3               |         |           | (5c) P1.4      | (5d) P1.4 |          |                                    |                  |                             |  |                      |                          |  |   |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                      |                     |                           |                |                                      |                | (14/15)                 | (15/16) |           |                | (14/15)   | (15/16)  |                                    |                  |                             |  |                      |                          |  |   | (14/15) | (15/16) |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (1) P1        | (2) P1.2             | (4) P1.12           | (5a) P1.3                 | (5b) P1.3      | (5c) P1.4                            | (5d) P1.4      | (% Implementation) (5e) | (6)     | (7)       | (8) P3         | (11)      | (12) F17 | (13) F4                            | (14a) Potable    | (14b) Potable + Non Potable | (14c) L/c/d                            | (14d)                | (15) C4                  |  |   |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 86            | Hay (Non Potable)    | Two Part            | Two Part                  | 320            | 327                                  | 335            |                         | All     | All       | All            | 32        | 33       | 34                                 |                  |                             |  | 100                  | 100                      | 82   | 91  | 80      | 830     | 830 | 830 | 1186                | 1200                       | 1227 | 0.8 | -0.2 | 2.1 | 0.2 | -0.9 | 1.5 | 86* | 79 | 284 | 284 | 1114 | 1243 | 1855 | Y | 1,380 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 87            | Bourke (Dual Supply) | Two Part            | Two Part                  | 164            | 168                                  | 176            |                         | All     | All       | All            | 216       | 216      | 216                                |                  |                             |  |                      |                          |  |   |         |         |     |     |                     |                            |      |     |      |     |     |      |     |     |    |     |     |      |      |      |   |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

NOTES: 1. **Residential Revenue from Usage Charges:** Where this is marked \*, it has been calculated from the projected typical residential bill for the 2015/16 financial year as this provides a higher value than the result for the 2014/15 financial year. 30 LWUs with 4,000 or more properties (64%) obtained at least 70% of residential revenue from water usage charges (column 13). This includes Wyong and Essential Energy, who have been granted a deemed compliance as their prices are regulated by IPART. 38 LWUs (87%) with fewer than 4,000 properties obtained at least 45% of their residential revenue from usage charges.

2. **The charges, bills and costs** shown for each financial year are those applicable at that time and involve no CPI adjustment. Column (5e) shows that 47% of LWUs now have residential water billing in accordance with the National Guidelines for Residential Customers' Water Accounts. A further 18% of LWUs have made significant progress towards such billing.

3. **Dual Water Supplies:** 12 LWUs had a dual water supply to over 50% of their residential customers with a potable supply for indoor use and a non-potable supply for outdoor use (refer to General Notes - Note 8 on page 33).

4. **Average Annual Residential Water Supplied (Dual Supplies):** The 12 Dual Supply LWUs are shown on two rows. The first row is labelled Dual Supply while the second row is labelled Non-Potable. The first row in column (14a) shows the **potable** average Annual Residential Water Supplied while the second row in column (14b) shows the **non-potable** Average Annual Residential Water Supplied (see also Note 8 on page 33). The total potable plus non-potable Average Annual Residential Water Supplied is shown in the first row in column (14b) and column (14c).

5. **Median Annual Residential Water Supplied:** The median Average Annual Residential Water Supplied (potable plus non-potable) has fallen by 50% over the last 24 years to 166 kL/property (184 L/person/d).

6. **Full Cost Recovery** has been achieved by all 96 LWUs. These comprise 76 utilities which had either an Economic Real Rate of Return or Return on Assets of  $\geq 0$  for the 2014/15 financial year (shown as "

**Table 6A: Water supply - 2015-16 residential multiple tariffs**

| WATER UTILITY |                          | Town   | Tariff Type     | Access Charge<br>(\$) | Access Charge Independent of Land Value ? | Allowance<br>(kL) | Usage Range<br>(kL)                         | Usage Charge<br>(c/kL) |
|---------------|--------------------------|--|-----------------|-----------------------|---|-------------------|---|------------------------|
|               |                          |  | (1)             | (2)                   | (3)                                       | (4)               | (5)   | (6)                    |
| 29            | Armidale Dumaresq        | Armidale   | Inclining Block | 215                   | Y   | Nil               | up to 400kL<br>401kL to 1000kL<br>>1000kL   | 241<br>320<br>364      |
|               |                          | Armidale, untreated  | Inclining Block | 215                   | Y   | Nil               | up to 400kL<br>401kL to 1000kL<br>>1000kL   | 118<br>209<br>257      |
| 100           | Balranald (Dual Supply)  | Balranald & Euston, Filtered                                       | Inclining Block | 187                   | Y   | Nil               | up to 600 kL<br>>600 kL                     | 94<br>141              |
|               |                          | Balranald & Euston, Raw  | Inclining Block | 198                   | Y   | Nil               | up to 600 kL<br>>600 kL                     | 52<br>78               |
| 21            | Bathurst Regional        | Filtered   | Inclining Block | 156                   | Y   | Nil               | up to 250 kL<br>>250 kL                     | 180<br>270             |
|               |                          | Raw Water  | Inclining Block | 156                   | Y   | Nil               | up to 250 kL<br>>250 kL                     | 79<br>119              |
|               |                          | Hillview Water   | Inclining Block | 141                   | Y   | Nil               | up to 250 kL<br>>250 kL                     | 189<br>378             |
| 53            | Berrigan (Dual Supply)   | Berrigan, Barooga, Finley (Potable)                                | Two Part        | 497                   | Y   | Nil               | All   | 94                     |
|               |                          | Berrigan, Barooga, Finley (Non-Potable)                            | Two Part        | 497                   | Y   | Nil               | All   | 47                     |
|               |                          | Tocumwal (Filtered)  | Two Part        | 497                   | Y   | Nil               | All   | 62                     |
| 89            | Bogan                    | Nyngan   | Two Part        | 536                   | Y   | Nil               | All   | 187                    |
|               |                          | Nyngan, Raw Water  | Two Part        | 436                   |   |                   | All   | 63                     |
|               |                          | Hermidale  | Annual Charge   | 633                   | Y   |                   |   |                        |
|               |                          | Girilambone & Coolabah   | Annual Charge   | 435                   | Y   |                   |   |                        |
| 97            | Bombala                  | Bombala  | Inclining Block | 565                   | Y   | Nil               | up to 350 kL<br>>350 kL                     | 130<br>180             |
|               |                          | Delegate   | Unmetered       | 433                   | Y   |                   |   |                        |
| 87            | Bourke (Dual Supply)     | Bourke, Filtered   | Two Part        | 176                   | Y   | Nil               | All   | 216                    |
|               |                          | Bourke, Raw  | Unmetered       | 437                   | Y   |                   |   |                        |
| 105           | Brewarrina (Dual Supply) | Brewarrina, Filtered   | Two Part        | 431                   | Y   | Nil               | All   | 190                    |
|               |                          | Brewarrina, Raw  | Unmetered       | 374                   | Y   | Nil               |   |                        |
|               |                          | Goodooga, Filtered   | Two Part        | 325                   | Y   | Nil               | All   | 190                    |
|               |                          | Goodooga, Raw  | Unmetered       | 349                   | Y   | Nil               |   |                        |
| 91            | Cabonne                  | Molong, Cumnock, Yeoval  | Inclining Block | 312                   | Y   | Nil               | up to 300 kL<br>301 kL to 500 kL<br>>500 kL | 190<br>450<br>610      |
|               |                          | North Yeoval Wellington  | Inclining Block | 211                   | Y   | Nil               | up to 300 kL<br>301 kL to 500 kL<br>>500 kL | 290<br>370<br>590      |
| 92            | Carrathool               | Carrathool, Hillston, Goolgowi Potable Water, Merriwaga Town Water | Two Part        | 402                   | Y   | Nil               | All   | 90                     |
|               |                          | Melbergen  | Two Part        | 1540                  | Y   | Nil               | All   | 194                    |
|               |                          | Goolgowi Raw Water, Rankins Springs Town Water                     | Two Part        | 381                   | Y   | Nil               | All   | 56                     |



**Table 6A: Water supply - 2015-16 residential multiple tariffs**

| WATER UTILITY |                           | Town   | Tariff Type     | Access Charge<br>(\$) | Access Charge Independent of Land Value ? | Allowance<br>(kL) | Usage Range<br>(kL)                     | Usage Charge<br>(c/kL) |
|---------------|---------------------------|--|-----------------|-----------------------|---|-------------------|---|------------------------|
|               |                           |  | (1)             | (2)                   | (3)                                       | (4)               | (5)                                     | (6)                    |
| 103           | Central Darling           | Wilcannia (Filtered)   | Two Part        | 150                   | Y   | Nil               | All                                     | 350                    |
|               |                           | Wilcannia (Raw)  | Unmetered       | 598                   | Y   |                   |   |                        |
|               |                           | White Cliffs, Raw  | Two Part        | 569                   | Y   | Nil               | All                                     | 380                    |
|               |                           | Ivanhoe (Raw)  | Two Part        | 294                   | Y   | Nil               | All                                     | 170                    |
|               |                           | Ivanhoe (Filtered)   | Two Part        | 175                   | Y   | Nil               | All                                     | 390                    |
| 67            | Cobar                     | Cobar  | Inclining Block | 240                   | Y   | Nil               | up to 450kL<br>451kL to 550kL<br>>550kL | 210<br>310<br>400      |
|               |                           | Nymagee, Euabalong, Euabalong West   | Unmetered       | 585                   | Y   |                   |   |                        |
|               |                           | Mount Hope   | Unmetered       | 680                   | Y   |                   |   |                        |
| 75            | Coonamble Shire           | Coonamble  | Inclining Block | 210                   | Y   | Nil               | up to 370 kL<br>>370 kL                 | 70<br>110              |
|               |                           | Gulargambone, Quambone   | Inclining Block | 272                   | Y   | Nil               | up to 430 kL<br>>430 kL                 | 80<br>125              |
|               |                           |  |                 |                       |   |                   |   |                        |
| 26            | Essential Energy          | Broken Hill, Menindi,<br>Pipeline Customers, Sunset Strip, Silverton (treated) | Two Part        | 317                   | Y   | Nil               | All                                     | 174                    |
|               |                           |  | Two Part        | 317                   | Y   | Nil               | All                                     | 75                     |
| 51            | Forbes                    | Filtered   | Two Part        | 211                   | Y   | Nil               | All                                     | 103                    |
|               |                           | Raw  | Two Part        |                       |   |                   | All                                     | 44                     |
|               |                           | Ootha  | Two Part        | 249                   | Y   | Nil               | All                                     | 103                    |
| 84            | Gilgandra (Groundwater)   | Gilgandra  | Two Part        | 233                   | Y   | Nil               | All                                     | 104                    |
|               |                           | Tooraweenah  | Two Part        | 114                   | Y   | Nil               | All                                     | 136                    |
| 20            | Goulburn Mulwaree Council | Goulburn   | Inclining Block | 210                   | Y   | Nil               | up to 292 kL<br>>292 kL                 | 280<br>378             |
|               |                           | Marulan  | Inclining Block | 284                   | Y   | Nil               | up to 292 kL<br>>292 kL                 | 280<br>378             |
| 30            | Griffith                  | Griffith (Filtered)  | Inclining Block | 129                   | Y   | Nil               | up to 200 kL<br>>200 kL                 | 67<br>130              |
|               |                           | Yenda (Dual), Filtered   | Inclining Block | 201                   | Y   | Nil               | up to 200 kL<br>>200 kL                 | 67<br>130              |
|               |                           | Yenda (Dual), Raw  | Two Part        |                       | Y   | Nil               | All                                     | 34                     |
|               |                           |  |                 |                       |   |                   |   |                        |
| 44            | Gunnedah (Groundwater)    | Gunnedah   | Inclining Block | 170                   | Y   | Nil               | up to 400 kL<br>>400 kL                 | 108<br>162             |
|               |                           | Curlewis   | Inclining Block | 190                   | Y   | Nil               | up to 400 kL<br>>400 kL                 | 113<br>170             |
|               |                           | Mullaley   | Inclining Block | 310                   | Y   | Nil               | up to 400 kL<br>>400 kL                 | 168<br>209             |
|               |                           | Tambar Springs   | Inclining Block | 360                   | Y   | Nil               | up to 400 kL<br>>400 kL                 | 269<br>335             |
|               |                           |  |                 |                       |   |                   |   |                        |

**Table 6A: Water supply - 2015-16 residential multiple tariffs**

| WATER UTILITY |                          | Town   | Tariff Type                  | Access Charge | Access Charge Independent of Land Value ? | Allowance | Usage Range   | Usage Charge      |
|---------------|--------------------------|--|------------------------------|---------------|---|-----------|---|-------------------|
|               |                          |  |                              | (\$)          |   | (kL)      | (kL)  | (c/kL)            |
|               |                          |  | (1)                          | (2)           | (3)                                       | (4)       | (5)   | (6)               |
| 86            | Hay (Dual Supply)        | Hay (Filtered)   | Inclining Block              | 132           | Y   | Nil       | up to 300 kL  | 110               |
|               |                          | Hay (Unfiltered)                                       | Unmetered                    | 335           |   |           | >300 kL   | 165               |
| 106           | Jerilderie (Dual Supply) | Jerilderie, Filtered                                   | Inclining Block              | 243           | Y   | Nil       | up to 250 kL  | 152               |
|               |                          | Jerilderie, Raw  | Two Part                     | 353           | Y   | Nil       | >250 kL<br>all  | 177<br>73         |
| 38            | Moree Plains Shire       | Moree, Mungindi, Boggabilla, Pallamallawa              | Inclining Block, Potable     | 280           | Y   | Nil       | up to 750 kL  | 158               |
|               |                          | Garah, Boomi, Boggabilla, Gurley, Weemalah             | Inclining Block, Non-Potable | 280           | Y   | Nil       | >750 kL<br>up to 750 kL<br>>750 kL                              | 205<br>106<br>173 |
| 65            | Murray                   | Murray, Filtered                                       | Two Part                     | 275           | Y   | Nil       | All   | 96                |
|               |                          | Murray, Raw  | Two Part                     | 102           | Y   | Nil       | All (93c for stage 2 and 3, 94c for stage 4 water restrictions) | 72                |
| 46            | Narrabri (Groundwater)   | Narrabri   | Two Part                     | 333           | Y   | Nil       | All   | 90                |
|               |                          | Narrabri, unmetered                                    | Unmetered                    | 486           | Y   |           |   |                   |
|               |                          | Gwabegar   | Two Part                     | 578           | Y   | Nil       | All   | 118               |
|               |                          | Wee Waa  | Two Part                     | 327           | Y   | Nil       | All   | 91                |
|               |                          | Boggabri   | Two Part                     | 356           | Y   | Nil       | All   | 103               |
|               |                          | Bellata  | Two Part                     | 506           | Y   | Nil       | All   | 118               |
|               |                          | Pilliga  | Two Part                     | 541           | Y   | Nil       | All   | 118               |
| 35            | Singleton                | Singleton  | Inclining Block              | 154           | Y   | Nil       | up to 450 kL  | 135               |
|               |                          |  |                              |               |   |           | >450 kL   | 245               |
|               |                          | Mt Thorley   | Two Part                     | 473           | Y   | Nil       | All   | 220               |
|               |                          | Jerry's Plains   | Inclining Block              | 154           | Y   | Nil       | up to 450 kL  | 170               |
|               |                          |  |                              |               |   |           | >450 kL   | 240               |
| 13            | Tamworth                 | Broke Water  | Inclining Block              | 154           | Y   | Nil       | up to 450 kL  | 185               |
|               |                          |  |                              |               |   |           | >450 kL   | 240               |
|               |                          | Tamworth   | Inclining Block              | 254           | Y   | Nil       | up to 400 kL  | 145               |
|               |                          |  |                              |               |   |           | 401 to 800 kL   | 218               |
|               |                          |  |                              |               |   |           | >800 kL   | 327               |
|               |                          | Calala Backwash Water                                  | Two Part                     |               | Y   | Nil       | All   | 34                |
|               |                          | Raw Water  | Inclining Block              |               | Y   |           | up to 400 kL  | 99                |
|               |                          |  |                              |               |   |           | 401 to 800 kL   | 109               |
|               |                          |  |                              |               |   |           | >800 kL   | 120               |
|               |                          | Dungowan Dam Raw Water<br>(if main traverses property) | Inclining Block              | 127           | Y   | Nil       | up to 400 kL  | 50                |
|               |                          |  |                              |               |   |           | 401 to 800 kL   | 109               |
|               |                          |  |                              |               |   |           | >800 kL   | 120               |



**Table 6A: Water supply - 2015-16 residential multiple tariffs**

| WATER UTILITY |                            | Town  | Tariff Type                             | Access Charge<br>(\$) | Access Charge Independent of Land Value ? | Allowance<br>(kL) | Usage Range<br>(kL) | Usage Charge<br>(c/kL) |
|---------------|----------------------------|---|---|-----------------------|---|-------------------|---------------------|------------------------|
|               |                            |   | (1)                                     | (2)                   | (3)                                       | (4)               | (5)                 | (6)                    |
| 43            | Tumut                      | Tumut Potable - All towns   | Two Part                                | 130                   | Y   | Nil               | All                 | 211                    |
|               |                            | Tumut Raw Water   | Two Part                                | 130                   | Y   | Nil               | All                 | 80                     |
| 45            | Upper Hunter Shire Council | Murrurundi  | Inclining Block                         | 291                   | Y   | Nil               | up to 300 kL        | 227                    |
|               |                            |   |   |                       |   |                   | >300 kL             | 307                    |
|               |                            | Merriwa/Cassilis, Aberdeen/Scone  | Inclining Block                         | 217                   | Y   | Nil               | up to 300 kL        | 192                    |
|               |                            |   |   |                       |   |                   | >300 kL             | 307                    |
| 88            | Wakool (Dual Supply)       | Barham, Tooleybuc, Moulamein (Filtered + Raw Water)   | Inclining Block, Raw Water is unmetered | 250+535               | Y   | Nil               | up to 600 kL        | 100                    |
|               |                            |   |   |                       | Y   |                   | >600 kL             | 158                    |
|               |                            | Wakool, Murray Downs, Koraleigh (Filtered)  | Inclining Block                         | 250                   | Y   | Nil               | up to 600 kL        | 100                    |
|               |                            |   |   |                       |   |                   | >600 kL             | 158                    |
| 79            | Walgett                    | Walgett, Collarenebri (Filtered)  | Inclining Block                         | 455                   | Y   | Nil               | up to 500 kL        | 76                     |
|               |                            |   |   |                       |   |                   | >500 kL             | 106                    |
|               |                            | Walgett, Collarenebri (Raw Water)   | Inclining Block                         | 455                   | Y   | Nil               | up to 600 kL        | 25                     |
|               |                            |   |   |                       |   |                   | >600 kL             | 35                     |
|               |                            | Lightning Ridge, Carinda, Rowena (Bore Water)   | Inclining Block                         | 300                   | Y   | Nil               | up to 600 kL        | 22                     |
|               |                            |   |   |                       |   |                   | >600 kL             | 31                     |
| 96            | Warren (Dual Supply)       | Warren Bore Water   | Inclining Block                         | 330                   | Y   | Nil               | up to 450 kL        | 103                    |
|               |                            |   |   |                       |   |                   | >450 kL             | 155                    |
|               |                            | Warren River Water  | Inclining Block                         | 330                   |   | Nil               | up to 450 kL        | 38                     |
|               |                            |   |   |                       |   |                   | >450 kL             | 66                     |
|               |                            | Nevertire Bore Water  | Inclining Block                         | 450                   | Y   | Nil               | up to 450 kL        | 59                     |
|               |                            |   |   |                       |   |                   | >450 kL             | 86                     |
|               |                            | Collie Bore Water   | Inclining Block                         | 335                   | Y   | Nil               | up to 400 kL        | 128                    |
|               |                            |   |   |                       |   |                   | >400 kL             | 193                    |
| 55            | Warrumbungle               | Coonabarabran, Timore Dam (Raw), Baradine, Binnaway, Villages: Bugaldie & Kenebri, Southern, Coolah, Dunedoo, Village Mendooran | Two Part                                | 364                   | Y   | Nil               | All                 | 190                    |
|               |                            |   | Two Part                                | 816                   | Y   | Nil               | All                 | 190                    |
| 74            | Wentworth (Dual Supply)    | Filtered  | Inclining Block                         | 270                   | Y   | Nil               | up to 250 kL        | 120                    |
|               |                            |   |   |                       |   |                   | >250 kL             | 280                    |
|               |                            | Raw   | Inclining Block                         | 145                   | Y   | Nil               | up to 700 kL        | 40                     |
|               |                            |   |   |                       |   |                   | >700 kL             | 110                    |
| 56            | Yass Valley                | Yass, Bowning, Binalong & Rural Areas   | Two Part                                | 450                   | Y   | Nil               | All                 | 290                    |
|               |                            | Murrumbateman   | Two Part                                | 338                   | Y   | Nil               | All                 | 290                    |

Table 6B: Water supply - 2015-16 non-residential tariffs

| WATER UTILITY |                          | Town   | Tariff Type     | Access Charge for 20 mm Service Connection (or Minimum) | Basis for Access Charge   | Access Charge Independent of Land Value ? | Allowance   | Usage Range       | Usage Charge  | Implemented 2(d) of BPMF |
|---------------|--------------------------|--|-----------------|---|---|---|-------------|-------------------|---------------|--------------------------|
|               |                          |  | (1)             | (\$)<br>(2)   | *Proportional to square of size of service connection or water meter<br>(3) | (4)                                       | (kL)<br>(5) | (kL)<br>(6)       | (c/kL)<br>(7) | (8)                      |
| 11            | Albury City              | Albury                                       | Two Part        | 128   | Meter Size* (eg. 40mm :\$510)   | Y   | Nil         | All               | 183           | Y                        |
| 29            | Armidale Dumaesq         | Armidale                                     | Inclining Block | 215   | Uniform Access Charge   | Y   | Nil         | up to 400 kL      | 241           | N                        |
|               |                          |  |                 |   |   |   |             | 401 kL to 1000 kL | 320           |                          |
|               |                          | Armidale, Untreated Water                    | Inclining Block | 215   | Uniform Access Charge   | Y   | Nil         | >1000 kL          | 364           |                          |
|               |                          |  |                 |   |   |   |             | up to 400 kL      | 118           |                          |
|               |                          |  |                 |   |   |   |             | 401 kL to 1000 kL | 209           |                          |
|               |                          |  |                 |   |   |   |             | >1000 kL          | 257           |                          |
| 24            | Ballina (Reticulator)    | Ballina                                      | Inclining Block | 195   | Service Connection Size* (eg. 40mm \$779)                                   | Y   | Nil         | up to 350 kL      | 208           | Y                        |
|               |                          |  |                 |   |   |   |             | >350 kL           | 313           |                          |
| 100           | Balranald (Dual Supply)  | Balranald & Euston, Filtered                 | Inclining Block | 187   | Service Connection Size* (eg. 40mm \$748)                                   | Y   | Nil         | up to 600 kL      | 94            | Y                        |
|               |                          | Balranald & Euston, Raw                      | Inclining Block | 198   | Service Connection Size* (eg. 40mm \$792)                                   | Y   | Nil         | >600 kL           | 141           |                          |
|               |                          |  |                 |   |   |   |             | up to 600 kL      | 52            |                          |
|               |                          |  |                 |   |   |   |             | >600 kL           | 78            |                          |
| 21            | Bathurst Regional        | Bathurst (Filtered)                          | Inclining Block | 156   | Service Connection Size* (eg. 40mm \$623)                                   | Y   | Nil         | up to 250kL       | 180           | Y                        |
|               |                          |  |                 |   |   |   |             | >250 kL           | 270           |                          |
| 23            | Bega Valley (Unfiltered) | Bega Valley                                  | Two Part        | 203   | Service Connection Size* (eg. 40mm \$812)                                   | Y   | Nil         | All               | 270           | Y                        |
| 47            | Bellingen (Unfiltered)   | Bellingen                                    | Two Part        | 117   | Service Connection Size* (eg. 40mm \$468)                                   | Y   | Nil         | All               | 163           | Y                        |
| 53            | Berrigan (Dual Supply)   | Berrigan, Barooga, Finley (Potable)          | Two Part        | 497   | Uniform Access Charge   | Y   | Nil         | All               | 94            | N                        |
|               |                          | Berrigan, Barooga, Finley (Non-Potable)      | Two Part        | 497   | Uniform Access Charge   | Y   | Nil         | All               | 47            |                          |
|               |                          | Tocumwal (Filtered)                          | Two Part        | 497   | Uniform Access Charge   | Y   | Nil         | All               | 62            |                          |
| 89            | Bogan                    | Nyngan                                       | Two Part        | 536   | Service Connection Size* (eg. 40mm \$2213)                                  | Y   | Nil         | All               | 187           | Y                        |
|               |                          | Nyngan, Raw Water                            | Two Part        | 436   |   | Y   | Nil         | All               | 63            |                          |
|               |                          | Hermidale                                    | Annual Charge   | 633   |   |   |             |                   |               |                          |
|               |                          | Girilambone & Coolabah                       | Annual Charge   | 435   |   |   |             |                   |               |                          |
| 97            | Bombala                  | Bombala                                      | Inclining Block | 565   | Uniform Access Charge   | Y   | Nil         | up to 350 kL      | 130           | N                        |
|               |                          |  |                 |   |   |   |             | >350 kL           | 180           |                          |
|               |                          | Delegate                                     | Unmetered       | 433   | Uniform Access Charge   | Y   |             |                   |               |                          |
| 104           | Boorowa                  | Boorowa                                      | Inclining Block | 472   | Uniform Access Charge   | Y   | Nil         | up to 200 kL      | 211           | N                        |
|               |                          |  |                 |   |   |   |             | >200 kL           | 422           |                          |
| 87            | Bourke (Dual Supply)     | Bourke, Filtered                             | Two Part        | 176   | Service Connection Size (eg. 40mm \$602)                                    | Y   | Nil         | All               | 216           | Y                        |
|               |                          | Bourke, Raw                                  | Unmetered       | 437   | Service Connection Size (eg. 40mm \$1379)                                   |   |             |                   |               |                          |
| 105           | Brewarrina (Dual Supply) | Brewarrina, Filtered                         | Unmetered       | 431   | Service Connection Size (eg. 40mm \$1725.40)                                | Y   | Nil         | All               | 190           | Y                        |
|               |                          | Brewarrina, Raw                              | Unmetered       | 374   | Service Connection Size (eg. 40mm \$1493)                                   | Y   | Nil         |                   |               |                          |
|               |                          | Goodooga, Filtered                           | Unmetered       | 425   | Service Connection Size (eg. 40mm \$1299.50)                                | Y   | Nil         | All               | 190           |                          |
|               |                          | Goodooga, Raw                                | Unmetered       | 349   | Service Connection Size (eg. 40mm \$1396.70)                                | Y   | Nil         |                   |               |                          |
| 27            | Byron (Reticulator)      | Byron  | Two Part        | 175   | Service Connection* (40mm: \$700)   | Y   | Nil         | All               | 260           | Y                        |
| 91            | Cabonne                  | Molong, Cumnock, Yeoval                      | Inclining Block | 312   | Service Connection (40mm: \$623.20)   | Y   | Nil         | up to 300 kL      | 190           | Y                        |
|               |                          |  |                 |   |   |   |             | 301 kL to 500 kL  | 450           |                          |
|               |                          |  |                 |   |   |   |             | >500 kL           | 610           |                          |
|               |                          | North Yeoval Wellington                      | Inclining Block | 211   | Service Connection (40mm: \$422.40)   | Y   | Nil         | up to 300 kL      | 290           |                          |
|               |                          |  |                 |   |   |   |             | 301 kL to 500 kL  | 370           |                          |
|               |                          |  |                 |   |   |   |             | >500 kL           | 590           |                          |
| 92            | Carrathool               | Carrathool, Hillston, Goolgowi Potable Water | Two Part        | 402   | Service Connection (40mm: \$463)  | Y   | Nil         | All               | 90            | Y                        |
|               |                          | Melbergen                                    | Two Part        | 1540  | Uniform Access Charge   | Y   | Nil         | All               | 194           |                          |
|               |                          | Merriwagga Town Water                        | Two Part        | 402   | Uniform Access Charge   | Y   | Nil         | All               | 90            |                          |
|               |                          | Goolgowi Raw Water, Rankins Springs          | Two Part        | 381   | Service Connection (40mm: \$453)  | Y   | Nil         | All               | 56            |                          |

Table 6B: Water supply - 2015-16 non-residential tariffs

| WATER UTILITY |                            | Town                                 | Tariff Type     | Access Charge for 20 mm Service Connection (or Minimum) | Basis for Access Charge   | Access Charge Independent of Land Value ? | Allowance   | Usage Range                   | Usage Charge  | Implemented 2(d) of BPMF |
|---------------|----------------------------|--------------------------------------|-----------------|---|---|---|-------------|-------------------------------|---------------|--------------------------|
|               |                            |                                      | (1)             | (\$)<br>(2)   | *Proportional to square of size of service connection or water meter<br>(3) | (4)                                       | (kL)<br>(5) | (kL)<br>(6)                   | (c/kL)<br>(7) | (8)                      |
| 103           | Central Darling            | Wilcannia (Filtered)                 | Two Part        | 150   | Uniform Access Charge   | Y   | Nil         | All                           | 350           | N                        |
|               |                            | Wilcannia (Raw)                      | Unmetered       | 598   | Uniform Access Charge   | Y   | Nil         |                               |               |                          |
|               |                            | White Cliffs (Raw)                   | Two Part        | 569   | Uniform Access Charge   | Y   | Nil         | All                           | 380           |                          |
|               |                            | Ivanhoe (Raw)                        | Two Part        | 294   | Uniform Access Charge   | Y   | Nil         | All                           | 170           |                          |
|               |                            | Ivanhoe (Filtered)                   | Two Part        | 175   | Uniform Access Charge   | Y   | Nil         | All                           | 390           |                          |
| 40            | Central Tablelands         | Central Tablelands, Quandialla       | Two Part        | 200   | Meter Size*(40mm: \$800)  | Y   | Nil         | All                           | 236           | Y                        |
| 14            | Clarence Valley            | Treated                              | Two Part        | 177   | Service Connection Size (40mm: \$708)                                       | Y   |             | All                           | 191           | Y                        |
|               |                            | Raw Water                            | Two Part        | 89  | Service Connection Size (40mm: \$354)                                       | Y   |             | All                           | 96            |                          |
| 67            | Cobar                      | Cobar                                | Inclining Block | 350   | Service Connection Size (40mm: \$770)                                       | Y   | Nil         | up to 450 kL                  | 210           | Y                        |
|               |                            |                                      |                 |   |   |   |             | 451 - 550 kL                  | 310           |                          |
|               |                            |                                      |                 |   |   |   |             | >551 kL                       | 400           |                          |
|               |                            |                                      |                 |   |   |   |             |                               |               |                          |
| 10            | Coffs Harbour              | Coffs Harbour, Nana Glen, Coramba    | Two Part        | 143   | Meter Size: 40mm \$572  | Y   | Nil         | All                           | 267           | Y                        |
| 50            | Cooma-Monaro               | Cooma, Bredbo, Nimmitabel            | Two Part        | 324   | Service Connection Size (40mm: \$1298)                                      | Y   | Nil         | All                           | 162           | Y                        |
| 75            | Coonamble Shire            | Coonamble                            | Inclining Block | 210   | Meter Size 40mm: \$840  | Y   | Nil         | up to 370 kL                  | 70            | Y                        |
|               |                            |                                      |                 |   |   |   |             | >370 kL                       | 110           |                          |
|               |                            | Gulargambone, Quambone               | Inclining Block | 272   | Meter Size 40mm: \$1088   | Y   | Nil         | up to 430 kL                  | 80            |                          |
|               |                            |                                      |                 |   |   |   |             | >430 kL                       | 125           |                          |
| 58            | Cootamundra (Reticulator)  | Cootamundra                          | Two Part        | 378   | Meter Size 40mm: \$1512   | Y   | Nil         | All                           | 213           | Y                        |
| 42            | Corowa                     | Corowa, Mulwala, Howlong             | Two Part        | 100   | Service Connection (eg. 40mm \$400)   | Y   | Nil         | All                           | 160           | Y                        |
| 39            | Cowra                      | Cowra, Rural, Commercial, Government | Two Part        | 313   | Meter Size: 40mm \$1252   | Y   | Nil         | All                           | 220           | Y                        |
|               |                            | Cowra, Industrial                    | Two Part        | 313   | Meter Size: 40mm \$1252   | Y   | Nil         | All                           | 86            |                          |
|               |                            | Raw Water                            | Two Part        | 313   | Meter Size: 40mm \$1252   |   | Nil         | All                           | 164           |                          |
| 54            | Deniliquin                 | Deniliquin, Filtered                 | Two Part        | 275   | Service connection (40mm: \$733)  | Y   | Nil         | All                           | 125           | Y                        |
|               |                            | Deniliquin, Raw                      | Two Part        | 164   | Uniform Access Charge   | Y   |             | All                           | 60            |                          |
| 18            | Dubbo                      | Dubbo                                | Two Part        | 250   | Meter Size* (eg. 40mm \$1000)   | Y   | Nil         | All                           | 191           | Y                        |
| 26            | Essential Energy           | Broken Hill, Menindi Treated         | Two Part        | 317   | Service Connection (eg. 40mm \$1266.95)                                     | Y   | Nil         | All                           | 174           | Y                        |
|               |                            | Chlorinated                          | Two Part        | 317   | Service Connection (eg. 40mm \$1266.95)                                     | Y   | Nil         | All                           | 112           |                          |
|               |                            | Untreated                            | Two Part        | 317   | Service Connection (eg. 40mm \$1266.95)                                     |   |             | All                           | 153           |                          |
|               |                            | Pipeline Customers                   | Two Part        | 317   | Service Connection (eg. 40mm \$1266.95)                                     | Y   | Nil         | All                           | 75            |                          |
| 15            | Eurobodalla                | Eurobodalla                          | Two Part        | 289   | Meter Size*: 40mm \$1156  | Y   | Nil         | up to 3650 kL                 | 348           | Y                        |
|               |                            |                                      | Bulk Tariff     |   |   |   |             | > 3650 kL                     | 174           |                          |
| 51            | Forbes                     | Forbes                               | Two Part        | 211   | Service Connection Size* (40mm: \$844)                                      | Y   | Nil         | All                           | 103           | Y                        |
| 84            | Gilgandra (Groundwater)    | Gilgandra                            | Two Part        | 233   | Service Connection Size* (40mm: \$936)                                      | Y   | Nil         | All                           | 104           | Y                        |
|               |                            | Tooraweenah                          | Two Part        | 114   | Uniform Access Charge   | Y   | Nil         | All                           | 136           |                          |
| 60            | Glen Innes Severn          | Glen Innes, Deepwater                | Two Part        | 284   | Service Connection Size* (40mm: \$505)                                      | Y   | Nil         | All                           | 215           | Y                        |
| 28A           | Goldenfields (Reticulator) | Retail                               | Two Part        | 312   | Meter Size*(40mm: \$1247.60)  | Y   | Nil         | All                           | 181           | Y                        |
| 1             | Gosford                    | Gosford                              | Two Part        | 174   | Service Connection Size* (40mm: \$620.04)                                   | Y   | Nil         | All                           | 226           | Y                        |
| 20            | Goulburn Mulwaree          | Goulburn                             | Inclining Block | 210   | Meter Size*(40mm: \$872)  | Y   | Nil         | up to 292 kL (for 20mm meter) | 280           | Y                        |
|               |                            |                                      |                 |   |   |   |             | >292 kL (for 20mm meter)      | 378           |                          |
|               |                            | Marulan                              | Inclining Block | 284   | Meter Size*(40mm: \$1165)   | Y   | Nil         | up to 292 kL (for 20mm meter) | 280           |                          |
|               |                            |                                      |                 |   |   |   |             | >292 kL (for 20mm meter)      | 378           |                          |
| 80            | Greater Hume               | Culcairn + Villages                  | Inclining Block | 339   | Service Connection Size (40mm: \$493)                                       | Y   | Nil         | up to 200kL                   | 160           | Y                        |
|               |                            |                                      |                 |   |   |   |             | >200kL                        | 240           |                          |



Table 6B: Water supply - 2015-16 non-residential tariffs

| WATER UTILITY |                                      | Town   | Tariff Type     | Access Charge for 20 mm Service Connection (or Minimum) | Basis for Access Charge   | Access Charge Independent of Land Value ? | Allowance   | Usage Range    | Usage Charge  | Implemented 2(d) of BPMF |
|---------------|--------------------------------------|--|-----------------|---|---|---|-------------|----------------|---------------|--------------------------|
|               |                                      |  | (1)             | (\$)<br>(2)   | *Proportional to square of size of service connection or water meter<br>(3) | (4)                                       | (kL)<br>(5) | (kL)<br>(6)    | (c/kL)<br>(7) | (8)                      |
| 30            | Griffith                             | Griffith (Filtered)                                      | Inclining Block | 129   | Meter Size*(40mm: \$516)  | Y   | Nil         | up to 200 kL   | 67            | Y                        |
|               |                                      | Yenda (Dual, Filtered)                                   | Inclining Block |   |   | Y   | Nil         | >200 kL        | 130           |                          |
|               |                                      | Yenda (Dual, Raw)  | Two Part        | 201   | Uniform Access Charge   |   | Nil         | up to 200 kL   | 67            |                          |
| 94            | Gundagai                             | Gundagai   | Two Part        | 170   | Service Connection Size: 40mm: \$680  | Y   | Nil         | >200 kL        | 130           |                          |
| 44            | Gunnedah (Groundwater)               | Gunnedah   | Inclining Block | 170   | Service Connection Size: 20-40mm: \$170, 50mm: \$400                        | Y   | Nil         | All            | 34            |                          |
|               |                                      | Curlewis   | Inclining Block | 190   | Service Connection Size: 20-40mm: \$190, 50mm: \$400                        | Y   | Nil         |                |               |                          |
|               |                                      | Mullaley   | Inclining Block | 310   | Service Connection Size: 20-40mm: \$310, 50mm: \$500                        | Y   | Nil         |                |               |                          |
|               |                                      | Tambar Springs   | Inclining Block | 360   | Service Connection Size: 20-40mm: \$360                                     | Y   | Nil         |                |               |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |
| 90            | Guyra                                | Guyra, Tingha  | Inclining Block | 310   | Uniform Access Charge   | Y   | Nil         | up to 400 kL   | 155           | N                        |
| 81            | Gwydir                               | Gwydir   | Inclining Block | 390   | Meter Size*(40mm: \$1560)   | Y   | Nil         | 401 to 1000 kL | 185           |                          |
|               |                                      |  |                 |   |   |   |             | > 1000 kL      | 195           |                          |
| 76            | Harden (Reticulator)                 | Harden   | Two Part        | 367   | Service Connection Size: 40 mm: \$1466.76                                   | Y   | Nil         | up to 600 kL   | 125           | Y                        |
| 7             | Port Macquarie-Hastings (Unfiltered) | Hastings   | Inclining Block | 194   | Meter Size* (eg. 40mm \$776)  | Y   | Nil         | >600 kL        | 195           |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |
| 86            | Hay (Dual Supply)                    | Hay (Filtered)   | Inclining Block | 132   | Uniform Access Charge   | Y   | Nil         | up to 270 kL   | 270           | Y                        |
|               |                                      | Hay (Unfiltered) - commercial users                      | Two Part        | 335   | Uniform Access Charge   | Y   | Nil         | >270 kL        | 540           |                          |
| 37            | Inverell                             | Inverell/Ashford/Yetman, Filtered                        | Inclining Block | 347   | Uniform Access Charge   | Y   | Nil         | up to 300 kL   | 110           | N                        |
| 106           | Jerilderie (Dual Supply)             | Jerilderie, Filtered                                     | Inclining Block | 243   | Service Connection Size*(32mm: \$609)                                       | Y   | Nil         | > 300 kL       | 165           |                          |
|               |                                      | Jerilderie, Raw  | Two Part        | 353   | Uniform Access Charge   | Y   | Nil         | All            | 34            |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |
| 25            | Kempsey (Groundwater)                | Kempsey  | Two Part        | 268   | Meter Size: 40 mm: \$1047   | Y   | Nil         | up to 600 kL   | 137           | N                        |
| 70            | Kyogle                               | Kyogle, Bonalbo, Muli-Muli, Woodenbong                   | Inclining Block | 344   | Service Connection Size: 40mm: \$1376                                       | Y   | Nil         | > 600 kL       | 160           |                          |
| 59            | Lachlan                              | Condoblin  | Two Part        | 355   | Service Connection Size: 40mm: \$1343.90                                    | Y   | Nil         | up to 250 kL   | 152           | Y                        |
| 48            | Leeton                               | Leeton, Whitton, Murrami                                 | Inclining Block | 264   | Meter Size*(40mm: \$1056)   | Y   | Nil         | >250 kL        | 177           |                          |
|               |                                      |  |                 |   |   |   |             | All            | 73            |                          |
| 22            | Lismore (Reticulator)                | Lismore, Nimbin  | Two Part        | 234   | Service Connection Size*(40mm: \$937.88)                                    | Y   | Nil         | All            | 219           | Y                        |
| 31            | Lithgow                              | Lithgow  | Two Part        | 675   | Service Connection Size (50mm: \$895)                                       | Y   | Nil         | All            | 311           | Y                        |
| 61            | Liverpool Plains Shire Council       | Quirindi, Werris Creek                                   | Inclining Block | 690   | Service Connection Size (eg. 40mm \$1737)                                   | Y   | Nil         | up to 200 kL   | 150           | Y                        |
|               |                                      | Villages   | Inclining Block | 690   | Service Connection Size (eg. 40mm \$1462)                                   | Y   | Nil         | > 200 kL       | 190           |                          |
| 5             | MidCoast                             | Great Lakes and Greater Taree, Gloucester                | Inclining Block | 215   | Meter Size* (eg. 40mm \$879)  | Y   | Nil         | up to 300 kL   | 128           | Y                        |
| 32            | Mid-Western Regional Council         | Mudgee, Gulgong, Rylstone                                | Two Part        | 144   | Meter Size* (eg. 40mm \$576)  | Y   | Nil         | >300 kL        | 208           |                          |
|               |                                      | Moree, Mungindi, Boggabilla, Pallamallawa, (Potable)     | Inclining Block | 280   | Service Connection Size (eg. 40mm \$1120)                                   | Y   | Nil         | up to 300 kL   | 128           |                          |
|               |                                      | Garah, Boomi, Boggabilla, Gurley, Weemalah (Non-Potable) | Inclining Block | 280   | Service Connection Size (eg. 40mm \$1120)                                   | Y   | Nil         | >300 kL        | 208           |                          |
| 38            | Moree Plains Shire                   | Moree, Mungindi, Boggabilla, Pallamallawa, (Potable)     | Inclining Block | 280   | Service Connection Size (eg. 40mm \$1120)                                   | Y   | Nil         | up to 200 kL   | 292           | Y                        |
|               |                                      |  |                 |   |   |   |             | >200 kL        | 326           |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |
|               |                                      |  |                 |   |   |   |             | up to 750 kL   | 158           | Y                        |
|               |                                      |  |                 |   |   |   |             | >750 kL        | 205           |                          |
|               |                                      |  |                 |   |   |   |             | up to 750 kL   | 106           |                          |
|               |                                      |  |                 |   |   |   |             | >750 kL        | 173           |                          |
|               |                                      |  |                 |   |   |   |             |                |               |                          |



**Table 6B: Water supply - 2015-16 non-residential tariffs**

| WATER UTILITY |                                  | Town   | Tariff Type   | Access Charge for 20 mm Service Connection (or Minimum) | Basis for Access Charge   | Access Charge Independent of Land Value ? | Allowance                                     | Usage Range   | Usage Charge  | Implemented 2(d) of BPF |
|---------------|----------------------------------|--|---|---|---|---|---|---|---|-------------------------|
|               |                                  |  | (1)   | (\$)<br>(2)   | *Proportional to square of size of service connection or water meter<br>(3)   | (4)                                       | (kL)<br>(5)                                   | (kL)<br>(6)   | (c/kL)<br>(7)   | (8)                     |
| 65            | Murray                           | Murray, Filtered<br>Murray, Raw  | Two Part<br>Two Part  | 275<br>102  | Service Connection Size (eg. 40mm \$1101.95)<br>Service Connection Size (eg. 40mm \$406.01)   | Y<br>Y                                    | Nil<br>Nil                                    | All<br>All (93c for stage 2 and 3, 94c for stage 3 water restrictions)  | 96<br>72  | Y                       |
| 101           | Murrumbidgee                     | Darlington Point, Coleambally  | Inclining Block   | 195   | Service Connection Size (eg. 40mm \$367)  | Y   | Nil   | up to 500 kL<br>>500 kL   | 40<br>60  | Y                       |
| 41            | Muswellbrook                     | Muswellbrook, Denman, Sandy Hollow   | Two Part  | 175   | Service Connection Size* (eg. 40mm \$700)   | Y   | Nil   | All   | 201   | Y                       |
| 34            | Nambucca                         | Nambucca   | Two Part  | 128   | Service Connection Size (eg. 40mm \$512)  | Y   | Nil   | All   | 290   | Y                       |
| 46            | Narrabri (Groundwater)           | Narrabri<br>Narrabri, unmetered<br>Gwabegar<br>Wee Waa<br>Boggabri<br>Bellata<br>Pilliga                         | Two Part<br>Unmetered<br>Two Part<br>Two Part<br>Two Part<br>Two Part<br>Two Part | 333<br>486<br>578<br>327<br>356<br>506<br>541           | Service Connection Size (eg. 40mm \$385)<br>Service Connection Size (eg. 40mm \$1210)<br>Service Connection Size* (eg. 40mm \$754)<br>Service Connection Size* (eg. 40mm \$399)<br>Service Connection Size* (eg. 40mm \$868)<br>Service Connection Size* (eg. 40mm \$1156)<br>Service Connection Size* (eg. 40mm \$720) | Y<br>Y<br>Y<br>Y<br>Y<br>Y<br>Y           | Nil<br>Nil<br>Nil<br>Nil<br>Nil<br>Nil<br>Nil | All<br>All<br>All<br>All<br>All<br>All<br>All   | 90<br><br>118<br>91<br>103<br>118<br>118                        | Y                       |
| 63            | Narrandera (Groundwater)         | Narrandera   | Two Part  | 273   | Meter Size (eg. 40mm \$1090)  | Y   | Nil   | All   | 102   | Y                       |
| 62            | Narromine (Groundwater)          | Narromine, Trangie, Tomingley  | Two Part  | 203   | Service Connection Size* (eg. 40mm \$804)   | Y   | Nil   | All   | 115   | Y                       |
| 83            | Oberon (Unfiltered, Reticulator) | Oberon   | Two Part  | 330   | Uniform Access Charge   | Y   | Nil   | All   | 280   | N                       |
| 19            | Orange                           | Orange   | Two Part  | 252   | Service Connection Size* (eg. 40mm \$966.12)  | Y   | Nil   | All   | 220   | Y                       |
| 71            | Palerang                         | Bungendore, Braidwood, Captains Flat   | Inclining Block   | 422   | Service Connection Size* (eg. 40mm \$1689.48)   | Y   | Nil   | up to 200 kL<br>>200kL  | 222<br>349  | Y                       |
| 36            | Parkes                           | Parkes   | Two Part  | 180   | Meter Size, eg : 40mm \$720   | Y   | Nil   | All   | 220   | Y                       |
| 17            | Queanbeyan (Reticulator)         | Queanbeyan   | Inclining Block   | 417   | Meter Size, eg : 40mm \$1806  | Y   | Nil   | up to 160 kL<br>>160 kL   | 297<br>456  | Y                       |
| 33            | Richmond Valley                  | All  | Two Part  | 133   | Service Connection Size* (eg. 40mm \$517)   | Y   | Nil   | All   | 203   | Y                       |
| 8             | Riverina                         | Wagga Wagga, Rural Towns & Villages  | Inclining Block   | 180   | Uniform Access Charge   | Y   | Nil   | up to 500 kL<br>>500 kL   | 140<br>210  | N                       |
| 4             | Rous County Council              | Bulk Supplier  | Two Part  | 143   | Service Connection Size* (eg. 40mm \$570.96)  | Y   | Nil   | All   | 205   |                         |
| 3             | Shoalhaven                       | Shoalhaven, treated  | Inclining Block   | 80  | Service Connection Size (40mm: \$320)   | Y   | Nil   | All   | 165   | Y                       |
| 35            | Singleton                        | Singleton<br>Mt Thorley<br>Jerry's Plains<br>Broke   | Two Part<br>Two Part<br>Two Part<br>Two Part                                      | 154<br>473<br>154<br>154                                | Meter Size* (eg. 40mm \$612.85)<br>Meter Size* (eg. 40mm \$933.20)<br>Meter Size* (eg. 50mm \$957.90)<br>Meter Size* (eg. 32mm \$391.40)  | Y<br>Y<br>Y<br>Y                          | Nil<br>Nil<br>Nil<br>Nil                      | All<br>All<br>All<br>All  | 140<br>220<br>240<br>240  | Y                       |
| 52            | Snowy River (Unfiltered)         | Snowy River  | Inclining Block   | 363   | Meter Size, eg : 40mm \$1452  | Y   | Nil   | up to 300 kL<br>>300 kL   | 230<br>350  | Y                       |
| 13            | Tamworth                         | Tamworth<br><br>Calala Backwash Water<br>Raw Water<br><br>Dungowan Dam Raw Water<br>(if main traverses property) | Inclining Block<br><br>Two Part<br>Inclining Block<br><br>Inclining Block         | 254<br><br><br><br>127                                  | Service Connection Size* (eg. 40mm \$1028)<br><br><br><br>Uniform Access Charge   | Y<br><br><br>Y                            | Nil<br><br><br>Nil                            | up to 400 kL<br>401 to 800 kL<br>>800 kL<br>All<br>up to 400 kL<br>401 to 800 kL<br>>800 kL<br>up to 400 kL<br>401 to 800 kL<br>>800 kL | 145<br>160<br>176<br>34<br>99<br>109<br>120<br>50<br>109<br>120 | Y                       |
| 68            | Tenterfield                      | Tenterfield, Jennings, Urbenville  | Inclining Block   | 164   | Meter Size* (eg. 40mm \$656.96)   | Y   | Nil   | up to 450 kL<br>> 450 kL  | 228<br>262  | Y                       |

**Table 6B: Water supply - 2015-16 non-residential tariffs**

| WATER UTILITY |                            | Town   | Tariff Type     | Access Charge for 20 mm Service Connection (or Minimum) | Basis for Access Charge   | Access Charge Independent of Land Value ? | Allowance   | Usage Range  | Usage Charge             | Implemented 2(d) of BPF |
|---------------|----------------------------|--|-----------------|---|---|---|-------------|--|--------------------------|-------------------------|
|               |                            |  | (1)             | (\$)<br>(2)   | *Proportional to square of size of service connection or water meter<br>(3) | (4)                                       | (kL)<br>(5) | (kL)<br>(6)  | (c/kL)<br>(7)            | (8)                     |
| 93            | Tumbarumba                 | Tumbarumba, Khancoban  | Inclining Block | 343   | Meter Size* (eg. 40mm \$1372)   | Y   | Nil         | up to 200 kL<br>>200 kL                                      | 184<br>310               | Y                       |
| 43            | Tumut                      | Tumut  | Two Part        | 130   | Meter Size (eg. 40mm \$520)   | Y   | Nil         | All  | 211                      | Y                       |
|               |                            | Tumut Raw Water  | Two Part        | 130   | Meter Size (eg. 40mm \$520)   |   |             | All  | 80                       |                         |
| 6             | Tweed                      | Tweed  | Two Part        | 159   | Meter Size*(40mm: \$634)  | Y   | Nil         | All  | 270                      | Y                       |
| 45            | Upper Hunter Shire Council | Murrurundi   | Two Part        | 291   | Meter Size (40mm: \$942)  | Y   | Nil         | All  | 297                      | Y                       |
|               |                            | Merriwa/Cassilis, Aberdeen/Scone   | Two Part        | 217   | Meter Size (40mm: \$868)  | Y   | Nil         | All  | 202                      |                         |
| 73            | Upper Lachlan Council      | Crookwell, Taralga, Dalton, Gunning  | Inclining Block | 430   | Uniform Access Charge   | Y   | Nil         | up to 200 kL<br>> 200 kL                                     | 269<br>356               | N                       |
| 85            | Uralla                     | Uralla, Bundarra   | Two Part        | 305   | Uniform Access Charge   | Y   | Nil         | All  | 220                      | N                       |
| 88            | Wakool (Dual Supply)       | Barham, Tooleybuc, Moulamein (Filtered + Raw)  | Two Part        | 250+535   | Service Connection Size*(40mm: \$2140)                                      | Y   | Nil         | All potable  | 100                      | Y                       |
|               |                            | Filtered   | Two Part        | 250   | Service Connection Size*(40mm: \$1000)                                      | Y   | Nil         | All  | 100                      |                         |
| 98            | Walcha                     | Walcha   | Two Part        | 210   | Service Connection Size (38mm: \$740)                                       | Y   | Nil         | All  | 272                      | Y                       |
| 79            | Walgett (Dual Supply)      | Walgett, Collarenebri (Filtered)   | Inclining Block | 455   | Service Connection Size*(40mm: \$1821.91)                                   | Y   | Nil         | up to 500 kL<br>>500 kL                                      | 76<br>106                | Y                       |
|               |                            | Walgett, Collarenebri (Raw Water)  | Inclining Block | 455   | Service Connection Size*(40mm: \$1821.91)                                   | Y   | Nil         | up to 600 kL<br>>600 kL                                      | 25<br>35                 |                         |
|               |                            | Lightning Ridge, Carinda, Rowena (Bore Water)  | Inclining Block | 300   | Service Connection Size*(40mm: \$1201.31)                                   | Y   | Nil         | up to 600 kL<br>>600 kL                                      | 22<br>31                 |                         |
| 96            | Warren (Dual Supply)       | Warren Bore Water  | Inclining Block | 330   | Uniform Access Charge   | Y   | Nil         | up to 450 kL<br>>450 kL                                      | 103<br>155               | N                       |
|               |                            | Warren River Water   | Inclining Block | 330   | Uniform Access Charge   |   | Nil         | up to 450 kL<br>>450 kL                                      | 38<br>66                 |                         |
|               |                            | Nevertire Bore Water   | Inclining Block | 450   | Uniform Access Charge   | Y   | Nil         | up to 450 kL<br>>450 kL                                      | 59<br>86                 |                         |
|               |                            | Collie Bore Water  | Inclining Block | 335   | Uniform Access Charge   | Y   | Nil         | up to 400 kL<br>>400 kL                                      | 128<br>193               |                         |
| 55            | Warrumbungle               | Coonabarabran, Timore Dam (Raw), Baradine, Binnaway, Southern, Coolah, Dunedoo, Village, Villages: Bugaldie, Kenebri | Two Part        | 364   | Uniform Access Charge   | Y   | Nil         | All  | 190                      | N                       |
|               |                            | Mendooran  | Two Part        | 816   | Uniform Access Charge   | Y   | Nil         | All  | 190                      |                         |
| 57            | Wellington                 | Wellington, Geurie   | Inclining Block | 457   | Service Connection Size (40mm: \$1818.78)                                   | Y   | Nil         | up to 300 kL<br>301 to 500 kL<br>500 to 10000kL<br>>10000 kL | 141<br>152<br>185<br>229 | Y                       |
| 74            | Wentworth (Dual Supply)    | Filtered   | Inclining Block | 270   | Service Connection Size*(40mm: \$1090)                                      | Y   | Nil         | up to 250 kL<br>>250 kL                                      | 120<br>280               | Y                       |
|               |                            | Raw  | Inclining Block | 145   | Service Connection Size (40mm: \$550)                                       | Y   | Nil         | up to 700 kL<br>>700 kL                                      | 40<br>110                |                         |
| 16            | Wingecarribee              | Wingecarribee  | Two Part        | 158   | Meter Size*(40mm: \$629)  |   | Nil         | All  | 178                      | Y                       |
| 2             | Wyang                      | Wyang  | Two Part        | 167   | Service Connection Size (40mm: \$586.09)                                    | Y   | Nil         | All  | 226                      | Y                       |
| 56            | Yass Valley                | Yass, Bowning, Binalong & Rural Areas  | Two Part        | 450   | Meter Size (40mm: \$704)  | Y   | Nil         | All  | 290                      | Y                       |
|               |                            | Murrumbateman  | Two Part        | 338   | Meter Size (40mm: \$422.40)   | Y   | Nil         | All  | 290                      |                         |
| 49            | Young (Reticulator)        | Young  | Two Part        | 275   | Meter Size* (40mm: \$1100)  | Y   | Nil         | All  | 270                      | Y                       |



Table 7: Sewerage - residential charges & bills, cost recovery

| WATER UTILITY                                    |                         | RESIDENTIAL CHARGES            |       |       |                      |       |       | NON-RESIDENTIAL CHARGES                       |       |                            |                                       |                          |       |                               |       |                             |                  | Typical Residential Bill       |       |       | COST RECOVERY                           |       |       |                     |                             |                  |                      |                            |       |                |           |           |         |  |  |  |
|--|-------------------------|--------------------------------|-------|-------|----------------------|-------|-------|---|-------|----------------------------|---------------------------------------|--------------------------|-------|-------------------------------|-------|-----------------------------|------------------|--------------------------------|-------|-------|---|-------|-------|---------------------|-----------------------------|------------------|----------------------|----------------------------|-------|----------------|-----------|-----------|---------|--|--|--|
|  |                         | Fixed Charge (\$) (or Minimum) |       |       | Operating Cost (OMA) |       |       | Non-Res Sewer Usage Charge                    |       | Liquid Trade Waste Charges |                                       | Non-Res & Trade Waste    |       | Typical Developer Charge      |       |                             | Return on Assets |                                |       |       | Economic Real Rate of Return (Sewerage) |       |       | Full Cost Recovery? | Recycled Water Usage Charge | Sewage Collected | Connected Properties |                            |       |                |           |           |         |  |  |  |
|  |                         |                                |       |       |                      |       |       |   |       |                            |                                       |                          |       |                               |       |                             |                  |                                |       |       |   |       |       |                     |                             |                  |                      |                            |       |                |           |           |         |  |  |  |
|  |                         | (\$)                           |       |       | (c/kL)               |       |       | (Not including SDF)                           |       | Usage Charge               |                                       | Appropriate TW Charges ? |       | Charges (% of Annual Charges) |       | Volume (% of sge collected) |                  | (\$/Equivalent Tenement (ETI)) |       |       | (\$/assessment)                         |       |       | (%)                 |                             |                  | (%)                  |                            |       | (FCR) (Y/Y*/N) | (c/kL)    | (kL/prop) | (No.)   |  |  |  |
|  |                         | (1) P4.1                       |       |       | (2)                  |       |       | (c/kL) (3a)                                   |       | (c/kL) (3b)                |                                       | (4)                      |       | (5)                           |       | (6)                         |                  | (7)                            |       |       | (8) P6                                  |       |       | (9)                 |                             |                  | (11) F18             |                            |       | (11a)          | (11b)     | (11c) W19 | (12) C8 |  |  |  |
|  |                         | 13/14                          | 14/15 | 15/16 | 12/13                | 13/14 | 14/15 | 14/15   | 15/16 | 14/15                      | 15/16                                 | 14/15                    | 15/16 | 14/15                         | 14/15 | 13/14                       | 14/15            | 15/16                          | 13/14 | 14/15 | 15/16                                   | 12/13 | 13/14 | 14/15               | 12/13                       | 13/14            | 14/15                | 14/15                      | 14/15 | 14/15          | 14/15     | 14/15     | 14/15   |  |  |  |
|  | Sydney Water            | 580                            | 592   | 609   |                      |       |       | 120   | 110   | 184                        | 213                                   | Y                        | Y     |                               |       |                             |                  |                                | 552   | 592   | 609                                     |       |       |                     | 1.4                         | 1.4              | 1.4                  | Y                          | 178   | 309            | 1,827,000 |           |         |  |  |  |
|  | Hunter Water            | 579                            | 586   | 594   |                      |       |       | 67  | 67    |                            |                                       | Y                        | Y     |                               |       |                             |                  |                                | 616   | 623   | 631                                     |       |       |                     | 2.1                         | 1.8              | 1.7                  | Y                          | 190   | 316            | 227,500   |           |         |  |  |  |
| LWUs with > 10,000 Properties                    |                         |                                |       |       |                      |       |       |   |       |                            |                                       |                          |       |                               |       |                             |                  |                                |       |       |   |       |       |                     |                             |                  |                      |                            |       |                |           |           |         |  |  |  |
| 1  | Gosford                 | 576                            | 612   | 641   | 189                  | 181   | 136   | 99  | 92    | 167                        | 168                                   | Y                        | Y     | 19                            | 15    | 2,850                       | 1,940            | 2,010                          | 576   | 612   | 641                                     | -0.4  | -0.2  | 0.2                 | -0.4                        | -0.1             | 0.3                  | Y                          | 167   | 278            | 70,000    |           |         |  |  |  |
| 2  | Wyong                   | 458                            | 471   | 477   | 126                  | 144   | 130   | 83  | 83    | 126                        | 148                                   | Y                        | Y     | 13                            | 25    | 2,610                       | 4,990            | 5,060                          | 458   | 471   | 477                                     | -0.2  | -0.3  | 0.2                 | -0.2                        | -0.4             | 0.2                  | Y                          | 112   | 259            | 61,930    |           |         |  |  |  |
| 3  | Shoalhaven              | 714                            | 750   | 772   | 255                  | 239   | 223   | 130   | 140   | 164                        | 168                                   | Y                        | Y     | 14                            | 15    | 8,340                       | 8,340            | 8,340                          | 714   | 750   | 772                                     | 1.4   | 1.6   | 3.4                 | 1.9                         | 2.2              | 3.9                  | Y                          |       | 224            | 41,870    |           |         |  |  |  |
| 5  | MidCoast (Combined)     | 920                            | 948   | 970   | 263                  | 304   | 279   | 245   | 252   | 250                        | 263                                   | Y                        | Y     | 13                            | 20    | 9,150                       | 9,400            | 9,680                          | 920   | 948   | 970                                     | 1.3   | 1.3   | 1.3                 | 2.8                         | 2.8              | 2.6                  | Y                          |       | 195            | 35,140    |           |         |  |  |  |
| 6  | Tweed                   | 691                            | 732   | 782   | 175                  | 229   | 199   | 140   | 150   | 200                        | 210                                   | Y                        | Y     | 17                            | 25    | 6,040                       | 6,200            | 6,310                          | 691   | 732   | 782                                     | 0.5   | 1.5   | 1.0                 | 0.6                         | 1.7              | 1.1                  | Y                          |       | 263            | 30,760    |           |         |  |  |  |
| 7  | Port Macquarie-Hastings | 704                            | 736   | 769   | 145                  | 160   | 170   | 111   | 116   | 155                        | 158                                   | Y                        | Y     | 12                            | 6     | 4,650                       | 3,530            | 3,620                          | 704   | 736   | 769                                     | 0.7   | 2.6   | 1.3                 | 0.6                         | 2.9              | 1.5                  | Y                          | 127   | 282            | 27,830    |           |         |  |  |  |
| 9  | Wagga Wagga             | 434                            | 434   | 454   | 188                  | 191   | 195   | 200   | 200   | 175                        | 180                                   | Y                        | Y     | 32                            | 15    | 3,500                       | 3,730            | 3,760                          | 434   | 434   | 454                                     | -0.3  | -0.5  | 0.5                 | 0.5                         | 0.3              | 1.3                  | Y                          | 89    | 214            | 27,180    |           |         |  |  |  |
| 10   | Coffs Harbour           | 783                            | 806   | 806   | 199                  | 267   | 199   | 206   | 209   | 163                        | 166                                   | Y                        | Y     | 21                            |       | 9,260                       | 9,940            | 9,690                          | 783   | 806   | 806                                     | -0.4  | -0.4  | -0.8                | 0.1                         | 0.5              | 0.1                  | Y                          |       | 310            | 23,710    |           |         |  |  |  |
| 11   | Albury City             | 561                            | 639   | 703   | 205                  | 210   | 212   | 283   | 292   | 166                        | 175                                   | Y                        | Y     | 25                            | 28    | 4,160                       | 4,000            | 4,070                          | 561   | 639   | 703                                     | 2.2   | 3.9   | 4.0                 | 2.6                         | 4.2              | 4.1                  | Y                          |       | 185            | 23,970    |           |         |  |  |  |
| 13   | Tamworth Regional       | 738                            | 758   | 777   | 152                  | 192   | 160   | 115   | 118   | 172                        | 176                                   | Y                        | Y     | 24                            | 53    | 1,880                       | 1,930            | 1,960                          | 738   | 758   | 777                                     | 0.9   | 1.6   | 2.4                 | 1.8                         | 2.5              | 3.2                  | Y                          | 10    | 265            | 19,680    |           |         |  |  |  |
| 15   | Eurobodalla             | 844                            | 865   | 886   | 296                  | 324   | 260   | 170   | 175   | 136                        | 140                                   | Y                        | Y     | 13                            | 12    | 9,830                       | 10,080           | 10,250                         | 844   | 865   | 886                                     | 0.7   | 0.6   | 1.3                 | 1.1                         | 1.0              | 1.7                  | Y                          |       | 193            | 18,050    |           |         |  |  |  |
| 17   | Queanbeyan              | 414                            | 470   | 533   | 205                  | 172   | 177   | 94  | 107   | 204                        | 232                                   | Y                        | Y     | 18                            | 16    | 1,330                       | 1,390            | 1,390                          | 414   | 470   | 533                                     | -1.0  | 3.6   | 2.4                 | -2.2                        | 2.6              | 1.3                  | Y                          |       | 213            | 17,280    |           |         |  |  |  |
| 19   | Orange                  | 384                            | 423   | 452   | 137                  | 163   | 172   | 202   | 216   | 202                        | 216                                   | Y                        | Y     | 24                            | 27    | 4,500                       | 4,600            | 4,640                          | 384   | 423   | 452                                     | 2.2   | 2.7   | 3.7                 | 1.2                         | 1.7              | 2.7                  | Y                          |       | 237            | 16,550    |           |         |  |  |  |
| 18   | Dubbo                   | 652                            | 690   | 712   | 204                  | 200   | 205   | 198   | 204   | 165                        | 183                                   | Y                        | Y     | 3                             | 36    | 5,340                       | 5,450            | 5,490                          | 652   | 690   | 712                                     | 2.3   | 3.4   | 4.4                 | 1.8                         | 2.7              | 3.9                  | Y                          |       | 170            | 16,420    |           |         |  |  |  |
| 16   | Wingecarribee           | 711                            | 739   | 756   | 151                  | 237   | 133   | 130   | 133   | 165                        | 182                                   | Y                        | Y     | 15                            | 17    | 8,030                       | 8,250            | 8,330                          | 711   | 739   | 756                                     | 0.8   | 0.6   | 2.4                 | 1.4                         | 1.1              | 3.0                  | Y                          |       | 331            | 15,730    |           |         |  |  |  |
| 14   | Clarence Valley         | 907                            | 988   | 1076  | 232                  | 287   | 238   | 299   | 326   | 260                        | 260                                   | Y                        | Y     | 17                            | 11    | 7,480                       | 7,670            | 7,810                          | 907   | 988   | 1076                                    | -0.3  | 0.6   | 0.9                 | 1.1                         | 2.3              | 2.5                  | Y                          |       | 194            | 14,710    |           |         |  |  |  |
| 21   | Bathurst Regional       | 456                            | 479   | 503   | 137                  | 139   | 168   | 135   | 145   | 210                        | 230                                   | Y                        | Y     | 35                            | 46    | 4,820                       | 4,970            | 5,260                          | 456   | 479   | 503                                     | 1.1   | 2.2   | 3.0                 | 0.7                         | 1.8              | 2.7                  | Y                          |       | 259            | 15,870    |           |         |  |  |  |
| 24   | Ballina                 | 734                            | 807   | 864   | 201                  | 306   | 169   | 205   | 219   | 163                        | 167                                   | Y                        | Y     | 19                            |       | 7,470                       | 7,700            | 4,880                          | 734   | 807   | 864                                     | -0.2  | -0.2  | 0.5                 | 0.6                         | 1.4              | 2.7                  | Y                          | 161   | 383            | 14,110    |           |         |  |  |  |
| 22   | Lismore                 | 738                            | 772   | 808   | 128                  | 159   | 145   |   |       | 103                        | 106                                   | Y                        | Y     | 21                            | 21    | 8,310                       | 10,330           | 10,810                         | 738   | 772   | 808                                     | 1.0   | 0.3   | 0.6                 | 0.5                         | 0.2              | 0.5                  | Y                          |       | 313            | 12,790    |           |         |  |  |  |
| 23   | Bega Valley             | 1081                           | 1109  | 1136  | 455                  | 425   | 402   | 369   | 378   | 100                        | 100                                   | Y                        | Y     | 10                            | 24    | 10,500                      | 11,070           | 11,260                         | 1081  | 1109  | 1136                                    | -0.7  | -0.1  | 0.3                 | -0.2                        | 0.4              | 0.7                  | Y                          |       | 184            | 12,180    |           |         |  |  |  |
| 27   | Byron*                  | 758                            | 780   | 802   | 171                  | 217   | 234   | 231   | 236   | 220                        | 220                                   | Y                        | Y     | 26                            | 33    | 12,580                      | 18,810           | 13,150                         | 1060  | 1093  | 1121                                    | -1.5  | 1.3   | 1.6                 | 1.2                         | 3.9              | 4.0                  | Y                          | 1     | 291            | 10,660    |           |         |  |  |  |
| 26   | Essential Energy        | 497                            | 511   | 518   | 234                  | 225   | 238   | 122   | 124   | 196                        | 199                                   | Y                        | Y     | 21                            | 40    |                             |                  |                                | 497   | 511   | 518                                     |       |       |                     |                             |                  |                      | Y*                         | 18    | 140            | 9,720     |           |         |  |  |  |
| 20   | Goulburn Mulwaree       | 699                            | 724   | 749   | 215                  | 211   | 183   | 283   | 292   | 250                        | 259                                   | Y                        | Y     | 30                            | 28    | 3,930                       | 4,470            | 4,470                          | 699   | 724   | 749                                     | 5.6   | 5.6   | 6.2                 | 5.8                         | 5.6              | 6.2                  | Y                          |       | 180            | 10,740    |           |         |  |  |  |
| 25   | Kempsey                 | 736                            | 791   | 850   | 216                  | 275   | 241   | 192   | 206   | 192                        | 206                                   | Y                        | Y     | 24                            | 19    | 7,630                       | 7,840            | 7,970                          | 736   | 791   | 850                                     | -1.2  | -1.1  | -0.2                | -0.6                        | -0.4             | 0.4                  | Y                          | 93    | 233            | 9,780     |           |         |  |  |  |
| Medians (% of LWUs basis) for >10,000 Properties |                         | 708                            | 738   | 771   | 200                  | 214   | 197   | 23 out of 24 have non-res sewer usage charges |       | 181                        | 24 out of 24 have trade waste charges |                          |       |                               |       | 6,040                       | 6,200            | 5,490                          | 708   | 738   | 771                                     | 0.7   | 1.3   | 1.3                 | 0.7                         | 1.7              | 2.5                  | 0 LWUs did not achieve FCR |       | 235            |           |           |         |  |  |  |
| LWUs with 3,001 - 10,000 Properties              |                         |                                |       |       |                      |       |       |   |       |                            |                                       |                          |       |                               |       |                             |                  |                                |       |       |   |       |       |                     |                             |                  |                      |                            |       |                |           |           |         |  |  |  |
| 29   | Armidale Dumaresq       | 379                            | 379   | 379   | 164                  | 124   | 87    |   |       | 145                        | 145                                   | Y                        | Y     | 34                            | 23    | 4,870                       | 4,870            | 5,070                          | 379   | 379   | 379                                     | 0.5   | 2.1   | 3.1                 | -0.1                        | 1.8              | 2.6                  | Y                          |       | 262            | 8,490     |           |         |  |  |  |
| 31   | Lithgow*                | 836                            | 836   | 878   | 155                  | 222   | 198   | 155   | 163   | 160                        | 170                                   | Y                        | Y     | 7                             |       | 1,790                       | 2,160            | 2,160                          | 836   | 836   | 878                                     | 1.8   | 1.8   | 0.6                 | 3.5                         | 1.7              | 1.8                  | Y                          |       | 286            | 7,490     |           |         |  |  |  |
| 30A  | Hawkesbury              | 584                            | 602   | 666   | 238                  | 204   | 182   |   |       | 123                        | 131                                   | Y                        | Y     | 30                            | 30    | 8,250                       | 8,460            | 8,610                          | 584   | 602   | 666                                     | -0.1  | -0.2  | -0.3                | -0.2                        | -0.4             | -0.3                 | Y*                         | 167   | 310            | 7,660     |           |         |  |  |  |
| 30   | Griffith                | 729                            | 750   | 774   | 199                  | 209   | 196   | 144   | 148   | 119                        | 122                                   | Y                        | Y     | 22                            | 14    | 3,100                       | 3,620            | 4,130                          | 729   | 750   | 774                                     | 0.6   | 0.3   | 0.4                 | 1.6                         | 1.3              | 1.4                  | Y                          |       | 301            | 7,050     |           |         |  |  |  |
| 33   | Richmond Valley         | 870                            | 896   | 918   | 220                  | 230   | 217   | 197   | 202   | 157                        | 162                                   | Y                        | Y     | 17                            |       | 8,000                       | 8,000            | 8,000                          | 870   | 896   | 918                                     | 1.6   | 0.9   | 1.5                 | 2.9                         | 2.5              | 2.4                  | Y                          |       | 274            | 6,640     |           |         |  |  |  |
| 32   | Mid Western Regional    | 651                            | 697   | 739   | 198                  | 258   | 222   | 223   | 236   |                            |                                       |                          |       | 17                            | 24    | 3,650                       | 3,770            | 3,860                          | 651   | 697   | 739                                     | 2.8   | 1.1   | 1.5                 | 3.3                         | 1.8              | 2.1                  | Y                          |       | 166            | 7,350     |           |         |  |  |  |
| 34   | Nambucca                | 588                            | 580   | 612   | 178                  | 214   | 163   | 330   | 331   | 174                        | 177                                   | Y                        | Y     | 26                            | 7     | 9,090                       | 9,340            | 9,490                          | 588   | 580   | 612                                     | -1.5  | 0.0   | 0.7                 | -1.1                        | 0.4              | 1.2                  | Y                          |       | 258            | 5,720     |           |         |  |  |  |
| 35   | Singleton               | 468                            | 480   | 495   | 142                  | 1     |       |   |       |                            |                                       |                          |       |                               |       |                             |                  |                                |       |       |   |       |       |                     |                             |                  |                      |                            |       |                |           |           |         |  |  |  |

Table 7: Sewerage - residential charges & bills, cost recovery

| WATER UTILITY  |                   | RESIDENTIAL CHARGES            |       |       |                      |       |       | NON-RESIDENTIAL CHARGES                       |       |                            |       |                                       |       |                               |       | Typical Residential Bill |        |        | COST RECOVERY    |       |        |   |       |       |                     |                             |                  |                            |                             |       |                                |           |         |
|--|-------------------|--------------------------------|-------|-------|----------------------|-------|-------|---|-------|----------------------------|-------|---------------------------------------|-------|-------------------------------|-------|--------------------------|--------|--------|------------------|-------|--------|---|-------|-------|---------------------|-----------------------------|------------------|----------------------------|-----------------------------|-------|--------------------------------|-----------|---------|
|  |                   | Fixed Charge (\$) (or Minimum) |       |       | Operating Cost (OMA) |       |       | Non-Res Sewer Usage Charge                    |       | Liquid Trade Waste Charges |       | Non-Res & Trade Waste                 |       | Typical Developer Charge      |       |                          |        |        | Return on Assets |       |        | Economic Real Rate of Return (Sewerage) |       |       | Full Cost Recovery? | Recycled Water Usage Charge | Sewage Collected | Connected Properties       |                             |       |                                |           |         |
|  |                   |                                |       |       |                      |       |       |   |       |                            |       |                                       |       |                               |       |                          |        |        |                  |       |        |   |       |       |                     |                             |                  |                            |                             |       |                                |           |         |
|  |                   | (\$)                           |       |       | (c/kL)               |       |       | (Not including SDF)                           |       | Usage Charge               |       | Appropriate TW Charges ?              |       | Charges (% of Annual Charges) |       |                          |        |        |                  |       |        |   |       |       |                     |                             |                  |                            | Volume (% of sge collected) |       | (\$/Equivalent Tenement [ETI]) |           |         |
|  |                   | (1) P4.1                       |       |       | (2)                  |       |       | (c/kL) (3a)                                   |       | (c/kL) (3b)                |       | (4)                                   |       | (5)                           |       | (6)                      |        | (7)    |                  |       | (8) P6 |   |       | (9)   |                     |                             | (11) F18         |                            |                             | (11a) | (11b)                          | (11c) W19 | (12) C8 |
|  |                   | 13/14                          | 14/15 | 15/16 | 12/13                | 13/14 | 14/15 | 14/15   | 15/16 | 14/15                      | 15/16 | 14/15                                 | 15/16 | 14/15                         | 14/15 | 13/14                    | 14/15  | 15/16  | 13/14            | 14/15 | 15/16  | 12/13                                   | 13/14 | 14/15 | 12/13               | 13/14                       | 14/15            | 14/15                      | 14/15                       | 14/15 | 14/15                          | 14/15     |         |
| 38   | Moree Plains      | 565                            | 630   | 650   | 184                  | 137   | 126   | 116   | 120   | 168                        | 200   | Y                                     | Y     | 34                            | 15    | 4,670                    | 4,700  | 4,780  | 565              | 630   | 650    | 0.4                                     | 0.2   | 4.0   | 0.3                 | 0.3                         | 4.1              | Y                          | 14                          | 352   | 3,950                          |           |         |
| 44   | Gunnedah          | 456                            | 492   | 505   | 111                  | 133   | 150   | 152   | 156   | 146                        | 150   | Y                                     | Y     | 26                            | 25    | 6,810                    | 7,050  | 7,230  | 456              | 492   | 505    | 3.2                                     | 3.5   | 5.8   | 2.3                 | 2.7                         | 4.9              | Y                          |                             | 190   | 3,970                          |           |         |
| 46   | Narrabri          | 615                            | 677   | 697   | 184                  | 223   | 226   |   |       | 200                        | 200   | Y                                     | Y     | 18                            | 33    | 5,080                    | 5,210  | 5,280  | 615              | 677   | 697    | 5.5                                     | 1.5   | 0.5   | 4.6                 | 1.0                         | 0.0              | Y                          |                             | 191   | 3,960                          |           |         |
| 43   | Tumut             | 620                            | 635   | 651   | 218                  | 206   | 303   | 185   | 190   |                            |       | Y                                     | Y     | 26                            |       | 5,000                    | 5,130  | 5,260  | 620              | 635   | 651    | 2.0                                     | 2.1   | 0.0   | 1.6                 | 1.5                         | -0.2             | Y                          |                             | 208   | 4,230                          |           |         |
| 49   | Young             | 720                            | 720   | 720   | 97                   | 229   | 229   |   |       | 156                        | 156   | Y                                     | Y     | 21                            | 28    | 1,280                    | 1,350  | 4,070  | 720              | 720   | 720    | 5.1                                     | 1.3   | 1.4   | 5.3                 | 2.9                         | 2.7              | Y                          |                             | 144   | 3,810                          |           |         |
| 39   | Cowra             | 781                            | 781   | 804   | 222                  | 262   | 284   | 73  | 75    | 159                        | 161   | Y                                     | Y     | 22                            |       | 5,360                    | 5,360  | 5,520  | 781              | 781   | 804    | 1.3                                     | 1.5   | 1.5   | 3.5                 | 3.1                         | 3.1              | Y                          |                             | 156   | 3,550                          |           |         |
| 45   | Upper Hunter      | 454                            | 477   | 501   | 170                  | 185   | 216   | 92  | 96    |                            |       | Y                                     | Y     | 19                            | 8     | 2,300                    | 1,540  | 1,580  | 454              | 477   | 501    | 1.9                                     | -1.0  | 1.0   | 0.9                 | -1.9                        | 0.2              | Y                          |                             | 210   | 4,290                          |           |         |
| 52   | Snowy River       | 840                            | 900   | 930   | 315                  | 421   | 339   | 308   | 315   | 175                        | 180   | Y                                     | Y     | 35                            | 34    | 5,400                    | 5,160  | 7,420  | 840              | 900   | 930    | 0.1                                     | 1.2   | 2.5   | 0.0                 | 1.4                         | 2.6              | Y                          |                             | 106   | 4,870                          |           |         |
| 51   | Forbes            | 466                            | 644   | 660   | 285                  | 219   | 225   | 147   | 153   | 67                         | 70    | Y                                     | Y     | 22                            | 35    | 3,980                    | 4,080  | 4,170  | 466              | 644   | 660    | -1.6                                    | 0.9   | 1.0   | -1.8                | 0.8                         | 0.9              | Y                          |                             | 207   | 3,200                          |           |         |
| 50   | Cooma-Monaro      | 781                            | 820   | 861   | 255                  | 311   | 224   |   |       | 170                        | 170   | Y                                     | Y     | 15                            |       | 7,000                    | 7,170  | 7,210  | 781              | 820   | 861    | 1.1                                     | 1.4   | 2.4   | 0.6                 | 1.0                         | 2.0              | Y                          |                             | 238   | 3,290                          |           |         |
| 53   | Berrigan          | 464                            | 477   | 501   | 214                  | 170   | 161   |   |       |                            |       |                                       |       | 9                             | 10    | 1,800                    | 1,850  | 2,100  | 464              | 477   | 501    | -2.0                                    | 1.9   | 1.3   | -2.9                | 0.8                         | 0.4              | Y                          | 26                          | 194   | 3,580                          |           |         |
| 48   | Leeton            | 480                            | 492   | 519   | 162                  | 231   | 187   | 80  | 87    | 177                        | 183   | Y                                     | Y     | 32                            | 17    | 5,000                    | 5,100  | 5,100  | 480              | 492   | 519    | 1.0                                     | 0.4   | 0.2   | -0.5                | -0.7                        | -0.6             | Y                          |                             | 249   | 3,330                          |           |         |
| 54   | Deniliquin        | 750                            | 770   | 789   | 246                  | 236   | 246   | 130   | 135   | 166                        | 170   | Y                                     | Y     | 16                            | 7     | 4,700                    | 4,650  | 4,500  | 750              | 770   | 789    | 5.5                                     | 4.7   | 2.0   | 5.3                 | 5.0                         | 2.1              | Y                          |                             | 174   | 3,250                          |           |         |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                   | 602                            | 640   | 656   | 191                  | 221   | 217   | 18 out of 24 have non-res sewer usage charges |       | 170                        |       | 21 out of 24 have trade waste charges |       |                               |       | 4,685                    | 4,675  | 4,640  | 602              | 640   | 656    | 1.7                                     | 1.5   | 1.5   | 2.0                 | 1.5                         | 2.1              | 0 LWUs did not achieve FCR |                             | 200   |                                |           |         |
| LWUs with 1,501 - 3,000 Properties                       |                   |                                |       |       |                      |       |       |   |       |                            |       |                                       |       |                               |       |                          |        |        |                  |       |        |   |       |       |                     |                             |                  |                            |                             |       |                                |           |         |
| 47   | Bellingen         | 725                            | 842   | 882   | 241                  | 313   | 264   | 94  | 97    | 140                        | 142   | Y                                     | Y     | 6                             | 10    | 4,790                    | 4,680  | 4,810  | 725              | 842   | 882    | 0.0                                     | 0.9   | 0.9   | -0.4                | 0.3                         | 0.3              | Y                          |                             | 250   | 3,050                          |           |         |
| 60   | Glen Innes Severn | 434                            | 450   | 473   | 120                  | 129   | 151   | 98  | 103   | 162                        | 169   | Y                                     | Y     | 6                             | 10    | 2,850                    | 2,930  | 3,000  | 434              | 450   | 473    | 1.3                                     | 1.7   | 1.8   | 1.5                 | 1.9                         | 1.8              | Y                          |                             | 191   | 2,760                          |           |         |
| 58   | Cootamundra       | 376                            | 388   | 398   | 114                  | 136   | 130   | 211   | 222   | 140                        | 200   | Y                                     | Y     | 25                            | 15    | 4,030                    | 4,260  | 4,370  | 376              | 388   | 398    | 1.3                                     | 1.3   | 1.4   | 1.3                 | 1.3                         | 1.4              | Y                          |                             | 176   | 2,820                          |           |         |
| 57   | Wellington        | 574                            | 587   | 611   | 199                  | 203   | 193   | 84  | 87    | 151                        | 157   | Y                                     | Y     | 24                            | 10    | 1,910                    | 1,650  | 1,650  | 574              | 587   | 611    | -1.3                                    | -1.2  | 0.8   | -0.6                | -0.4                        | 1.5              | Y                          |                             | 209   | 2,650                          |           |         |
| 91   | Cabonne           | 465                            | 475   | 487   | 305                  | 361   | 471   | 120   | 120   | 160                        | 160   | Y                                     | Y     | 17                            |       | 5,300                    | 6,280  | 6,350  | 465              | 475   | 487    | -0.5                                    | -0.5  | -1.0  | -0.6                | -0.7                        | -1.2             | Y*                         |                             | 154   | 1,930                          |           |         |
| 80   | Greater Hume      | 445                            | 489   | 504   | 177                  | 185   | 226   | 132   | 136   | 160                        | 160   | Y                                     | Y     | 26                            | 15    | 3,000                    | 4,020  | 4,140  | 445              | 489   | 504    | -0.4                                    | 0.4   | 0.5   | -0.6                | 0.1                         | 0.3              | Y                          | 60                          | 155   | 2,620                          |           |         |
| 59   | Lachlan           | 440                            | 458   | 545   | 190                  | 199   | 205   | 120   | 125   | 140                        | 145   | Y                                     | Y     | 4                             |       | 7,750                    | 7,750  | 7,750  | 440              | 458   | 545    | -0.7                                    | -0.7  | -1.7  | -2.2                | -2.1                        | -2.6             | Y*                         |                             | 220   | 2,200                          |           |         |
| 65   | Murray            | 381                            | 389   | 397   | 143                  | 157   | 182   | 53  | 54    | 166                        | 169   | Y                                     | Y     | 30                            | 36    | 1,160                    | 1,190  | 1,210  | 381              | 389   | 397    | 2.2                                     | 2.6   | 2.5   | 1.6                 | 2.0                         | 1.9              | Y                          |                             | 182   | 3,140                          |           |         |
| 62   | Narromine         | 534                            | 548   | 565   | 122                  | 298   | 257   | 200   | 205   | 200                        | 205   | Y                                     | Y     | 22                            |       | 4,110                    | 3,670  | 3,820  | 534              | 548   | 565    | 0.8                                     | 1.3   | 0.4   | 0.3                 | 0.7                         | -0.2             | Y                          |                             | 185   | 1,960                          |           |         |
| 56   | Yass Valley       | 580                            | 595   | 620   | 240                  | 220   | 226   | 225   | 230   | 160                        | 170   | Y                                     | Y     |                               | 23    | 5,650                    | 5,790  | 5,940  | 580              | 595   | 620    | 1.4                                     | 1.7   | 3.2   | 1.0                 | 0.0                         | 2.9              | Y                          |                             | 192   | 2,470                          |           |         |
| 61   | Liverpool Plains  | 490                            | 504   | 516   | 170                  | 171   | 242   | 170   | 174   | 300                        | 300   | Y                                     | Y     | 14                            | 28    | 2,860                    | 2,910  | 2,960  | 490              | 504   | 516    | 2.0                                     | 2.2   | 1.9   | 1.4                 | 1.8                         | 1.2              | Y                          |                             | 132   | 2,020                          |           |         |
| 55   | Warrumbungle      | 445                            | 458   | 469   | 211                  | 358   | 309   | 77  | 79    | 160                        | 160   |                                       |       | 22                            | 29    | 1,280                    | 1,300  | 1,320  | 445              | 458   | 469    | 0.4                                     | 0.0   | -0.3  | -0.3                | -1.1                        | -1.0             | Y*                         |                             | 140   | 2,540                          |           |         |
| 69   | Temora            | 296                            | 311   | 326   | 155                  | 147   | 119   | 34  | 36    |                            |       |                                       |       | 22                            | 17    |                          |        |        | 296              | 311   | 326    | 0.3                                     | 0.1   | 1.7   | 0.0                 | 0.0                         | 1.5              | Y                          | 80                          | 151   | 2,160                          |           |         |
| 71   | Palerang          | 922                            | 946   | 982   | 282                  | 260   | 290   | 269   | 279   | 200                        | 250   | Y                                     | Y     | 5                             |       | 10,800                   | 11,200 | 11,610 | 922              | 946   | 982    | 0.3                                     | 0.6   | 1.6   | 1.1                 | 1.7                         | 2.5              | Y                          | 150                         | 177   | 2,110                          |           |         |
| 72   | Bland             | 614                            | 669   | 685   | 184                  | 183   | 184   | 22  | 35    | 85                         | 156   | Y                                     | Y     | 4                             |       | 1,760                    | 2,120  | 2,120  | 614              | 669   | 685    | 2.2                                     | 2.7   | 3.4   | 2.1                 | 2.6                         | 3.3              | Y                          |                             | 195   | 1,840                          |           |         |
| 63   | Narrandera        | 505                            | 505   | 518   | 256                  | 224   | 248   | 120   | 123   |                            |       |                                       |       | 20                            |       | 1,300                    | 650    | 1,000  | 505              | 505   | 518    | 3.9                                     | 2.8   | 1.7   | 3.4                 | 2.1                         | 1.2              | Y                          | 20                          | 175   | 1,710                          |           |         |
| 67   | Cobar             | 310                            | 320   | 330   | 76                   | 118   | 103   | 175   | 180   | 170                        | 175   | Y                                     | Y     | 11                            | 7     | 920                      | 920    | 950    | 310              | 320   | 330    | -0.6                                    | -1.3  | -1.1  | -0.6                | -1.7                        | -1.5             | Y*                         | 35                          | 250   | 1,740                          |           |         |
| 74   | Wentworth         | 690                            | 705   | 720   | 22                   | 23    | 25    |   |       | 165                        | 173   | Y                                     | Y     | 10                            |       | 5,670                    | 6,250  | 6,560  | 690              | 705   | 720    | 3.7                                     | 2.4   | 2.7   | 3.7                 | 2.1                         | 2.4              | Y                          |                             | 1,306 | 1,630                          |           |         |
| 75   | Coonamble         | 440                            | 465   | 479   | 143                  | 132   | 103   | 85  | 88    |                            |       |                                       |       | 18                            | 11    |                          |        |        | 440              | 465   | 479    | 0.4                                     | 0.5   | 1.0   | -1.0                | -0.3                        | 0.1              | Y                          |                             | 236   | 1,190                          |           |         |
| 70   | Kyogle            | 625                            | 643   | 662   | 202                  | 284   | 225   | 100   | 103   | 100                        | 103   | Y                                     | Y     | 18                            | 20    | 1,900                    | 2,130  | 2,340  | 625              | 643   | 662    | -0.2                                    | 0.1   | -0.1  | 0.1                 | 0.4                         | 0.2              | Y                          |                             | 248   | 1,710                          |           |         |
| 77   | Junee             |                                |       |       |                      |       |       |   |       |                            |       |                                       |       |                               |       |                          |        |        |                  |       |        |   |       |       |                     |                             |                  |                            |                             |       |                                |           |         |



Table 7: Sewerage - residential charges & bills, cost recovery

| WATER UTILITY | RESIDENTIAL CHARGES            |     |      |                      |     |     | NON-RESIDENTIAL CHARGES    |              |                            |                               |                             |       |                          |       | Typical Residential Bill |                |        | COST RECOVERY    |   |  |  |                     |                             |                  |                      |           |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               | Fixed Charge (\$) (or Minimum) |     |      | Operating Cost (OMA) |     |     | Non-Res Sewer Usage Charge |              | Liquid Trade Waste Charges |                               | Non-Res & Trade Waste       |       | Typical Developer Charge |       |                          |                |        | Return on Assets | Economic Real Rate of Return (Sewerage) |  |  | Full Cost Recovery? | Recycled Water Usage Charge | Sewage Collected | Connected Properties |           |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                                |     |      |                      |     |     | (Not including SDF)        | Usage Charge | Appropriate TW Charges ?   | Charges (% of Annual Charges) | Volume (% of sge collected) | (%)   |                          |       | (%)                      | (FCR) (Y/Y*/N) | (c/kL) |                  |   |  |  |                     |                             |                  |                      | (kL/prop) | (No.) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               | (1)                            | (2) | (3a) | (3b)                 | (4) | (5) | (6)                        | (7)          | (8)                        | (9)                           | (11)                        | (11a) | (11b)                    | (11c) | (12)                     |                |        |                  |   |  |  |                     |                             |                  |                      |           |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               | P4.1                           |     |      |                      |     |     |                            |              |                            |                               |                             |       |                          |       |                          |                |        |                  |   |  |  |                     |                             |                  |                      |           |       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

NOTES: 1. 79 LWUs have non-residential sewerage charges which substantially meet the requirements of the Best-Practice Management Guidelines (Appendix C, page 84) and 80 LWUs have appropriate trade waste fees and charges.

2. The charges, bills and costs shown for each financial year are those applicable at that time and involve no CPI adjustment.

3. Full Cost Recovery for sewerage has been achieved by 97 utilities. These comprised 87 utilities which had either an Economic Real Rate of Return or Return on Assets of >=0 for the 2014/15 financial year, shown as "Y" in col (11a). In addition they include 10 utilities which have significantly increased their 2015/16 charges in order to recover all their costs which are shown as "Y\*". A total of 2 LWUs did not achieve full cost recovery. These are shown as "N".

4. Byron also has a residential sewer usage charge of 177c/kL. Lithgow removed its sewer usage charge in 2013/14.

Table 7A: Sewerage - 2015-16 residential multiple tariffs

| WATER UTILITY |                           | Town   | Access Charge<br>(or Minimum)<br>(\$)<br>(1) | Access Charge Independent<br>of Land Value ?<br>(2) |
|---------------|---------------------------|--|--|---|
| 87            | Bombala                   | Bombala                                      | 646  | Y   |
|               |                           | Delegate                                     | 524  | Y   |
| 105           | Brewarrina                | Brewarrina                                   | 774  | Y   |
|               |                           | Goodooga                                     | 336  | Y   |
| 91            | Cabonne                   | Molong                                       | 235  | Y   |
|               |                           | Canowindra, Cudal, Manildra, Cumnock, Yeoval | 481  | Y   |
|               |                           | Eugowra                                      | 409  | Y   |
| 92            | Carrathool                | Hillston                                     | 425  | Y   |
|               |                           | Goolgowi                                     | 373  | Y   |
| 75            | Coonamble                 | Coonamble                                    | 479  | Y   |
|               |                           | Gulargambone                                 | 660  | Y   |
| 60            | Glen Innes Severn         | Glen Innes                                   | 473  | Y   |
|               |                           | Deepwater                                    | 378  | Y   |
| 20            | Goulburn Mulwaree Council | Goulburn                                     | 749  | Y   |
|               |                           | Marulan                                      | 905  | Y   |
| 44            | Gunnedah                  | Gunnedah                                     | 505  | Y   |
|               |                           | Curlewis                                     | 692  | Y   |
| 90            | Guyra                     | Guyra  | 596  | Y   |
|               |                           | Tingha                                       | 421  | Y   |
| 102           | Lockhart                  | Lockhart                                     | 490  | Y   |
|               |                           | The Rock                                     | 450  | Y   |
|               |                           | Yerong Creek                                 | 440  | Y   |
| 101           | Murrumbidgee              | Darlington Point                             | 375  | N   |
|               |                           | Coleambally                                  | 299  | N   |
| 46            | Narrabri                  | Narrabri                                     | 697  | Y   |
|               |                           | Wee Waa                                      | 714  | Y   |
|               |                           | Boggabri                                     | 550  | Y   |
| 88            | Wakool                    | Barham, Moulamein, Murray Downs              | 595  | Y   |
|               |                           | Wakool, Tooleybuc                            | 552  | Y   |
| 79            | Walgett                   | Walgett                                      | 454  | Y   |
|               |                           | Lightening Ridge                             | 403  | Y   |
|               |                           | Collarenebri                                 | 495  | Y   |
| 96            | Warren                    | Warren                                       | 500  | Y   |
|               |                           | Nevertire                                    | 525  | Y   |
| 57            | Wellington                | Wellington, Geurie                           | 611  | Y   |
|               |                           | Mumbil                                       | 571  | Y   |

NOTE: This Table only lists LWUs with multiple tariffs for residential customers.  
Residential tariffs for all LWUs are shown in Table 7.

Table 7B: Sewerage - 2015-16 non-residential tariffs

| WATER UTILITY |                   | Town   | Access Charge (or Minimum) | Access Charge Independent of Land Value? | Basis for Access Charge<br>*Proportional to square of size of service connection or water meter   | Sewer Usage Charge<br>(for estimated volume discharged to sewerage system = water usage x sewer discharge factor)                                    | Substantially Implemented<br>2(c) of BPMF<br><br>Yes/No |
|---------------|-------------------|--|----------------------------|--|---|--|---|
|               |                   |  | (\$)                       |  |   |  |   |
|               |                   |  | (1)                        | (2)                                      | (3)   | (4)  | (5)   |
| 11            | Albury            | Albury                                       | 249                        | Y  | Meter Size (40mm: \$994.20 x SDF)   | 292 c/kL   | Y   |
| 29            | Armidale Dumaresq | Armidale                                     | 379                        | Y  | Uniform Access Charge<br>Multiple Units: \$337.40/WC; Hotels, Motels: \$124.15/WC, \$53.05/Urinals  |  | N   |
| 24            | Ballina           | Ballina                                      | 651                        | Y  | Service connection size* (40mm \$2611)  | 219 c/kL   | Y   |
| 100           | Balranald         | Balranald                                    | 269                        | Y  | Service connection size* (40mm \$1076)  | 15 c/kL  | Y   |
| 21            | Bathurst Regional | Bathurst                                     | 454                        | Y  | Service connection size* (40mm: \$1813)   | 145 c/kL   | Y   |
| 23            | Bega Valley       | Bega Valley                                  | 1136                       | Y  | Meter size* (eg. 40mm \$4544)   | 378 c/kL   | Y   |
| 47            | Bellingen         | Bellingen, Urunga, Dorrigo                   | 882                        | Y  | Meter size* (eg. 40mm \$3528)   | 97 c/kL  | Y   |
| 53            | Berrigan          | Berrigan, Finley, Tocumwal, Barooga          | 501                        | Y  | Uniform Access Charge<br>After two WCs \$106/WC   |  | N   |
| 72            | Bland             | Bland  | 685                        | Y  | Uniform Access Charge<br>\$138/WC, \$72/Urinal  |  | N   |
| 78            | Blayney           | Blayney, Millthorpe                          | 544                        | Y  | Service connection size* (40mm \$1783)  | 115 c/kL   | Y   |
| 89            | Bogan             | Nyngan                                       | 540                        | Y  | Service connection size* (40mm \$1944)  | 207 c/kL   | Y   |
| 97            | Bombala           | Bombala                                      | 646                        | Y  | Uniform Access Charge   | 22 c/kL  | Y   |
|               |                   | Delegate                                     | 524                        | Y  | Uniform Access Charge   | 92 c/kL  |   |
| 104           | Boorowa           | Boorowa                                      | 640                        | Y  | Uniform Access Charge   |  | N   |
| 87            | Bourke            | Bourke                                       | 673                        | Y  | Uniform Access Charge   |  | N   |
| 105           | Brewarrina        | Brewarrina                                   | 774                        | Y  | Uniform Access Charge   | \$65.55/Urinals, Additional WCs (2-5) \$195.60, additional WC \$65.55/WC<br>\$65.55/Urinals, Additional WCs (2-5) \$195.60, additional WC \$65.55/WC | N   |
|               |                   | Goodooga                                     | 336                        | Y  | Uniform Access Charge   |  |   |
| 27            | Byron             | Byron  | 802                        | Y  | Service connection size* (40mm \$3208)  | 236 c/kL   | Y   |
| 91            | Cabonne           | Molong                                       | 235                        | Y  | Service connection size (40mm \$659.10)   | 120 c/kL   | Y   |
|               |                   | Canowindra, Manildra, Cudal, Cumnock, Yeoval | 481                        | Y  | Service connection size (40mm \$667)  | 120 c/kL   |   |
|               |                   | Eugowra                                      | 409                        | Y  | Service connection size (40mm \$647.30)   | 120 c/kL   |   |
| 92            | Carrathool        | Hillston                                     | 425 + \$43/unit            | Y  | Uniform Access Charge<br>Motels: Base+10% Base charge/unit; Service Station: 1.5 Base Charge; laundromat, Clubs & Hotels: 2xBase Charge       | \$135/WC, \$68/Urinal<br><br>\$135/WC, \$68/Urinal   | N   |
|               |                   | Goolgowi                                     | 373 + \$37/unit            |  | Uniform Access Charge<br>Motels: Base+10% Base charge/unit; Service Station: 1.5 Base Charge; laundromat: 2xBase Charge, Clubs & Hotels \$897 |  |   |
| 103           | Central Darling   | Wilcannia                                    | 488                        | Y  | Uniform Access Charge<br>After two fittings, \$168.75/additional fitting  |  | Y   |
| 14            | Clarence Valley   | Clarence Valley                              | 622                        | Y  | Service connection size* (40mm: \$2488)   | 326 c/kL   | Y   |
| 67            | Cobar             | Cobar  | 330                        | Y  | Service connection size* (40mm: \$1320)   | 180 c/kL   | Y   |
| 10            | Coffs Harbour     | Coffs Harbour                                | 789 x MF x SDF             | Y  | MF - meter factor = [water meter size (mm)/20]^2 SDF - sewage discharge factor  | 209 c/kL   | Y   |
| 99            | Coolamon          | Coolamon, Gainmain                           | 410                        | Y  | Uniform Access Charge   | for >2 Pedestals, \$110/Pedestal   | N   |
| 50            | Cooma-Monaro      | Cooma, Nimmitabel                            | 919 for usage <100kL       | Y  | Sliding Access Charge<br>\$919 for consumption < 100 kL, increasing to \$21750 for consumption > 8,000 kL                                     |  | Y   |
| 75            | Coonamble         | Coonamble                                    | 479                        | Y  | Uniform Access Charge   | 88 c/kL  | Y   |
|               |                   | Gulargambone                                 | 660                        | Y  | Uniform Access Charge   | 104 c/kL   |   |
| 58            | Cootamundra       | Cootamundra                                  | 234                        | Y  | Meter Size* 40mm: \$936   | 222 c/kL   | Y   |
| 42            | Corowa            | Corowa, Howlong, Mulwala                     | 393                        | Y  | Service connection size (40mm: \$1572)  | 131 c/kL   | Y   |
| 39            | Cowra             | Cowra  | 658                        | Y  | Service connection size* (40mm: \$720)  | 75 c/kL  | Y   |
| 54            | Deniliquin        | Deniliquin                                   | 789                        | Y  | Uniform Access Charge   | 135 c/kL   | Y   |



Table 7B: Sewerage - 2015-16 non-residential tariffs

| WATER UTILITY |                         | Town   | Access Charge (or Minimum) | Access Charge Independent of Land Value? | Basis for Access Charge<br>*Proportional to square of size of service connection or water meter | Sewer Usage Charge<br>(for estimated volume discharged to sewerage system = water usage x sewer discharge factor) | Substantially Implemented<br>2(c) of BPFM<br><br>Yes/No |
|---------------|-------------------------|--|----------------------------|--|---|---|---|
|               |                         |  | (\$)                       |  |   |   |   |
|               |                         |  | (1)                        | (2)                                      | (3)   | (4)   | (5)   |
| 18            | Dubbo                   | Dubbo  | 374                        | Y  | Service connection size* (40mm: \$1497.92)  | 204 c/kL  | Y   |
| 26            | Essential Energy        | Broken Hill  | 739                        | Y  | Service connection size* (40mm: \$2957.82)  | 124 c/kL  | Y   |
| 15            | Eurobodalla             | Eurobodalla  | 886                        | Y  | Meter Size (Availability Factor based)* (eg. 40mm \$3544)                                       | 175 c/kL  | Y   |
| 51            | Forbes                  | Forbes   | 504                        | Y  | Service Connection Size* (40mm: \$2016)   | 153 c/kL  | Y   |
| 84            | Gilgandra               | Gilgandra  | 268                        | Y  | Service Connection Size*(40mm: \$1066)  | 150 c/kL  | Y   |
| 60            | Glen Innes Severn       | Glen Innes, Deepwater  | 190                        | Y  | Service Connection Size*(40mm: \$756)   | 103 c/kL  | Y   |
| 1             | Gosford                 | Gosford  | 641                        | Y  | Meter Size*(40mm \$3489.42)   | 92 c/kL   | Y   |
| 20            | Goulburn Mulwaree       | Goulburn   | 411                        | Y  | Meter Size* (40mm: \$1653)  | 292 c/kL  | Y   |
|               |                         | Marulan  | 666                        | Y  | Meter Size* (40mm: \$2434)  | 292 c/kL  |   |
| 80            | Greater Hume            | Burrumbuttock, Jindera, Holbrook, Culcairn, Henty, Walla Walla | 254                        | Y  | Service Connection Size (40mm: \$390)   | 136 c/kL  | Y   |
| 30            | Griffith                | Griffith   | 444                        | Y  | Service Connection Size* (40mm: \$1479)   | 148 c/kL  | Y   |
| 94            | Gundagai                | Gundagai   | 170                        | Y  | Service Connection (40mm: \$680)  | 262 c/kL  | Y   |
| 44            | Gunnedah                | Gunnedah   | 197                        | Y  | Service Connection Size (40mm: \$787.30)  | 156 c/kL  | Y   |
|               |                         | Curlewis   | 213                        | Y  | Service Connection Size (40mm: \$853.63)  | 244 c/kL  |   |
| 90            | Guyra                   | Guyra  | 596                        | Y  | Uniform Access Charge   | Ist WC/Urinal covered by rate, 2 to 6: \$251/WC or Urinal, All additional: \$131/WC or Urinal                     | N   |
|               |                         | Tingha   | 421                        | Y  | Uniform Access Charge   |   |   |
| 81            | Gwydir                  | Bingara, Warialda  | 425                        | Y  | Meter Size (eg 40mm: \$1695)  | 245 c/kL  | Y   |
| 76            | Harden                  | Harden   | 236                        | Y  | Service Connection*(eg 40mm: \$943.11)  | 220 c/kL  | Y   |
| 7             | Port Macquarie-Hastings | Hastings   | 769                        | Y  | Uniform Access Charge   | 135 c/kL  | Y   |
| 30A           | Hawkesbury              | Category 1, Vol < 1kL/d  | 776                        | Y  | Uniform Access Charge   | for waste > 20 kL/d, 278c/kL  | Y   |
|               |                         | Category 2, Vol : 1kL to 5 kL/d                                | 3890                       | Y  | Uniform Access Charge   |   |   |
|               |                         | Category 3, Vol < 5kL to 10 kL/d                               | 7749                       | Y  | Uniform Access Charge   |   |   |
|               |                         | Category 4, Vol : 10kL to 20 kL/d                              | 15450                      | Y  | Uniform Access Charge   |   |   |
|               |                         | Category 5, Vol > 20 kL/d                                      | 15450                      | Y  | Uniform Access Charge   |   |   |
| 86            | Hay                     | Hay  | 542                        | Y  | Uniform Access Charge   | 110 c/kL  | Y   |
| 37            | Inverell                | Inverell, Ashford, Delungra, Gilgai                            | 476                        | Y  | Uniform Access Charge   |   | N   |
| 106           | Jerilderie              | Jerilderie   | 480                        | Y  | Service Connection*(eg 32mm: \$1280)  | 75 c/kL   | Y   |
| 77            | Junee                   | Junee  | 365                        | Y  | Uniform Access Charge \$91.70/WC, \$35.30/Urinal  |   | N   |
| 25            | Kempsey                 | Kempsey  | 786                        | Y  | Meter Size (eg 40mm: \$2800)  | 206 c/kL  | Y   |
| 70            | Kyogle                  | Kyogle   | 261                        | Y  | Service Connection Size*(40mm: \$1044)  | 103 c/kL  | Y   |
| 59            | Lachlan                 | Lachlan  | 308                        | Y  | Service Connection*(eg 40mm: \$1232)  | 125 c/kL  | Y   |
| 48            | Leeton                  | Leeton   | 519                        | Y  | Service Connection Size*(40mm: \$440.84)  | 87 c/kL   | Y   |
| 22            | Lismore                 | Lismore, Nimbin, Perradenya                                    | 808                        | Y  | Uniform Access Charge   |   | N   |
| 31            | Lithgow                 | Lithgow, Wallerawang, Portland                                 | 756                        | Y  | Service Connection Size (50mm: \$1001.70)   | 163 c/kL  | Y   |
| 61            | Liverpool Plains        | Quirindi, Werris Creek   | 334                        | Y  | Service Connection Size*(40mm: \$1174)  | 174 c/kL  | Y   |
| 102           | Lockhart                | Lockhart   | 168                        | Y  | Service Connection Size*(40mm: \$646)   | 191 c/kL  | Y   |
|               |                         | The Rock   | 288                        | Y  | Service Connection Size*(40mm: \$1117)  | 82 c/kL   |   |
| 5             | MidCoast                | Great Lakes, Greater Taree Area, Gloucester                    | 731                        | Y  | Meter Size*(eg 40mm: \$2944)  | 252 c/kL  | Y   |
| 32            | Mid-Western Regional    | Mudgee, Gulgong, Rylstone                                      | 412                        | Y  | Uniform Access Charge   | 236 c/kL  | Y   |
| 38            | Moree Plains Shire      | Moree, Mungindi, Balone, Bogabilla, Gurly                      | 650                        | Y  | Service Connection Size (40mm: \$1259.40)   | 120 c/kL  | Y   |
| 65            | Murray                  | Moama, Mathoura  | 285                        | Y  | Service Connection Size*(40mm: \$1141.34)   | 54 c/kL   | Y   |
| 101           | Murrumbidgee            | Darlington Point   | 375                        | N  | Land Value<br>Land Value  |   | N   |
|               |                         | Coleambally  | 299                        | N  |   |   |   |
| 41            | Muswellbrook            | Muswellbrook, Denman   | 248                        | Y  | Service Connection Size*(40mm: \$992)   | 201 c/kL  | Y   |



Table 7B: Sewerage - 2015-16 non-residential tariffs

| WATER UTILITY |                 | Town                                     | Access Charge (or Minimum) | Access Charge Independent of Land Value? | Basis for Access Charge<br>*Proportional to square of size of service connection or water meter                  | Sewer Usage Charge<br>(for estimated volume discharged to sewerage system = water usage x sewer discharge factor) | Substantially Implemented<br>2(c) of BPMF<br><br>Yes/No |
|---------------|-----------------|--|----------------------------|--|--|---|---|
|               |                 |  | (\$)                       |  |  |   |   |
|               |                 |  | (1)                        | (2)                                      | (3)  | (4)   | (5)   |
| 34            | Nambucca        | Nambucca                                 | 239                        | Y  | Service Connection Size (40mm: \$956)  | 331 c/kL  | Y   |
| 46            | Narrabri        | Narrabri                                 | 697                        | Y  | Uniform Access Charge \$108/Pedestal, Cistern  |   | N   |
|               |                 | Wee Waa                                  | 714                        | Y  | Uniform Access Charge \$108/Pedestal, Cistern  |   |   |
|               |                 | Bogabri                                  | 550                        | Y  | Uniform Access Charge \$87/Pedestal/Cistern  |   |   |
| 63            | Narrandera      | Narrandera                               | 375                        | Y  | Service Connection Size* (40mm: \$1500)  | 123 c/kL  | Y   |
| 62            | Narromine       | Narromine, Trangie                       | 202                        | Y  | Service Connection Size*(40mm: \$806)  | 205 c/kL  | Y   |
| 83            | Oberon          | Oberon                                   | 152                        | Y  | Service Connection Size*(38mm: \$550)  | 225 c/kL  | Y   |
| 19            | Orange          | Orange                                   | 146                        | Y  | Service connection Size 40mm: \$584  | 216 c/kL  | Y   |
| 71            | Palerang        | Bungendore, Braidwood, Captains Flat     | 1126                       | Y  | Service connection Size 40mm: \$4504   | 279 c/kL  | Y   |
| 36            | Parkes          | Parkes                                   | 242                        | Y  | Meter Size* (40mm: \$968)  | 125 c/kL  | Y   |
| 17            | Queanbeyan      | Queanbeyan                               | 432                        | Y  | Service Connection Size (40mm: \$1885)   | 107 c/kL  | Y   |
| 33            | Richmond Valley | All                                      | 133                        | Y  | Service Connection Size*(40mm: \$534)  | 202 c/kL  | Y   |
| 3             | Shoalhaven      | Shoalhaven                               | 772                        | Y  | Meter Size (40mm: \$2190)  | 140 c/kL  | Y   |
| 35            | Singleton       | Singleton                                | 495                        | Y  | Service connection Size* 40mm: \$1980  | 166 c/kL  | Y   |
| 52            | Snowy River     | Snowy River                              | 870                        | Y  | Meter Size (40mm: \$3480)  | 315 c/kL  | Y   |
| 13            | Tamworth        | Tamworth                                 | 501                        | Y  | Meter Size (40mm: \$2001)  | 118 c/kL Strata lot availability: \$777   | Y   |
| 69            | Temora          | Temora                                   | 258                        | Y  | Meter Size* (40mm: \$1030.80)  | 36 c/kL   | Y   |
| 68            | Tenterfield     | Tenterfield, Urbenville                  | 444                        | Y  | Service Connection Size*(40mm: \$1776)   | 107 c/kL  | Y   |
| 93            | Tumbarumba      | Tumbarumba, Khancoban                    | 357                        | Y  | Meter Size (40mm: \$1428)  | 119 c/kL  | Y   |
| 43            | Tumut           | Tumut                                    | 615                        | Y  | Meter Size* (40mm: \$2480)   | 190 c/kL  | Y   |
| 6             | Tweed           | Tweed                                    | 782                        | Y  | Service Connection Size*(40mm: \$3128)   | 150 c/kL  | Y   |
| 45            | Upper Hunter    | Murrurundi, Merriwa, Aberdeen, Scone     | 603                        | Y  | Meter Size (40mm \$1213)   | 96 c/kL   | Y   |
| 73            | Upper Lachlan   | Crookwell, Gunning, Taralga              | 752                        | Y  | Uniform Access Charge  | 269 c/kL  | Y   |
| 85            | Uralla          | Uralla                                   | 378                        | Y  | Uniform Access Charge  | 105 c/kL  | Y   |
| 107           | Urana           |  | 485                        | Y  | Uniform Access Charge  |   | N   |
| 9             | Wagga Wagga     | Wagga Wagga                              | 112                        | Y  | Meter Size (40mm \$448)  | 200 c/kL  | Y   |
| 88            | Wakool          | Barham, Moulamein, Murray Downs          | 653                        | Y  | Uniform Access Charge Hotels: SC+20%SC/Cistern+10%SC/Room, Clubs: SC+20%SC/Cistern, Shops/Motels/Units: SC+10%SC |   | N   |
|               |                 | Wakool, Tooleybuc                        | 610                        | Y  | Uniform Access Charge Hotels: SC+20%SC/Cistern+10%SC/Room, Clubs: SC+20%SC/Cistern, Shops/Motels/Units: SC+10%SC |   |   |
| 98            | Walcha          | Walcha                                   | 450                        | Y  | Service Connection Size*(40mm: \$1800)   | 97 c/kL   | Y   |
| 79            | Walgett         | Walgett                                  | 454                        | Y  | Uniform Access Charge Additional SC/Pedestal, \$71.16/Cistern  |   | N   |
|               |                 | Lightening Ridge                         | 403                        | Y  | Uniform Access Charge Additional SC/Pedestal, \$63.28/Cistern  |   |   |
|               |                 | Collarenebri                             | 495                        | Y  | Uniform Access Charge Additional SC/Pedestal, \$64.05/Cistern  |   |   |
| 96            | Warren          | Warren, Nevertire                        | 460                        | Y  | Uniform Access Charge  | 180 c/kL  | Y   |
| 55            | Warrumbungle    | Coolah, Dunedoo, Coonabarabran, Baradine | 301                        | Y  | Meter Size* (40mm \$1202)  | 79 c/kL   | Y   |
| 95            | Weddin          | Grenfell                                 | 561                        | Y  | Uniform Access Charge  |   | N   |
| 57            | Wellington      | Wellington, Mumbil, Geurie               | 335                        | Y  | Meter Size* (40mm \$1340.97)   | 87 c/kL   | Y   |
| 74            | Wentworth       | Wentworth, Nimatjira                     | 720                        | Y  | Uniform Access Charge Additional SC/Pedestal, \$102/Cistern  |   | N   |
| 16            | Wingecarribee   | Wingecarribee                            | 622                        | Y  | Meter Size* (40mm: \$2489)   | 133 c/kL  | Y   |
| 2             | Wyong           | Wyong                                    | 477                        | Y  | Meter Size* (40mm: \$1085.37)  | 83 c/kL   | Y   |
| 56            | Yass Valley     | Yass                                     | 620                        | Y  | Uniform Access Charge  | 230 c/kL  | Y   |
| 49            | Young           | Young                                    | 720                        | Y  | Uniform Access Charge  |   | N   |

Table 7C: Sewerage - Liquid trade waste fees and charges - 2015-16

| WATER UTILITY |                         | Does LWU have appropriate Liquid Trade Waste Policy <sup>1,2</sup> ? | Appropriate Trade Waste Fees & Charges (Yes/No) | All liquid trade waste approvals (Yes/No) | ANNUAL TRADE WASTE FEE (\$) |            |            | Reinspection Fee \$/inspection Cat/1/2/3 | Category 2 Trade Waste Usage Charge (c/kL) | Category 2 Non Compliance Trade Waste Usage Charge (\$/kL) (9A) | Excess Mass Charge (c/kg) |                  |              | Non Compliance Excess Mass Charge for BOD (Yes/No) |
|---------------|-------------------------|--|---|---|-----------------------------|------------|------------|--|--|---|---------------------------|------------------|--------------|--|
|               |                         |  |   |   | Category 1                  | Category 2 | Category 3 |  |  |   | BOD                       | Suspended Solids | Oil & Grease |  |
|               |                         | (1)<br>2014-15   | (2)   | (3)                                       | (4)                         | (6)        | (7)        | (8)                                      | (9)  | (9A)  | (10)                      | (11)             | (12)         | (13)   |
| 11            | Albury City             | Yes  | Yes   | Yes                                       | 80                          | 80         | 344        |  | 175  | 4.9   | 36                        | 24               | 60           |  |
| 29            | Armidale Dumaresq       | Yes*   | Yes   | Yes                                       | 85                          | 170        | 424        | 154                                      | 145  | 12.5  |                           |                  |              | Yes  |
| 24            | Ballina                 | Yes  | Yes   | Yes                                       | 85                          | 175        | 580        | 124                                      | 167  | 12.7  | 76                        | 96               | 134          |  |
| 100           | Balranald               |  | Yes   |   | 113                         | 113        | 510        | 77                                       | 130  | 12.9  | 65                        | 80               | 115          |  |
| 21            | Bathurst Regional       | Yes  | Yes   |   | 103                         | 103        | 686        | 96                                       | 230  | 18.1  | 91                        | 115              | 160          |  |
| 23            | Bega Valley             | Yes  | Yes   |   | 128                         | 128        | 128        |  | 100  | 9.0   |                           |                  |              | Yes  |
| 47            | Bellingen               | Yes  | Yes   |   | 200                         | 200        |            | 134                                      | 142  | 14.9  |                           |                  |              |  |
| 53            | Berrigan                |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 72            | Bland                   | Yes  | Yes   |   | 95                          | 170        | 564        | 80                                       | 156  | 14.4  | 71                        | 91               | 127          | Yes  |
| 78            | Blayney                 | Yes  | Yes   | Yes                                       | 85                          | 85         | 319        | 78                                       | 160  | 17.1  | 80                        | 100              | 145          | Yes  |
| 89            | Bogan                   | Yes  | Yes   |   | 85                          | 169        |            | 85                                       | 161  | 15.1  |                           |                  |              | Yes  |
| 97            | Bombala                 |  | Yes   |   | 113                         | 113        | 746        |  | 22   |   |                           |                  |              |  |
| 104           | Boorowa                 | Yes*   | Yes   |   | 134                         | 134        | 134        | 62                                       |  |   |                           |                  |              |  |
| 87            | Bourke                  | Yes  | Yes   |   |                             |            |            |  | 177  | 14.5  |                           |                  |              |  |
| 105           | Brewarrina              | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 27            | Byron                   | Yes  | Yes   | Yes                                       | 150                         | 250        | 420        |  | 220  | 14.0  | 152                       | 152              | 179          | Yes  |
| 91            | Cabonne                 | Yes  | Yes   |   | 92                          | 184        | 620        | 85                                       | 160  | 15.8  | 60                        | 80               | 110          |  |
| 92            | Carrathool              |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 103           | Central Darling         |  | Yes   |   |                             |            |            |  |  |   |                           |                  |              |  |
| 14            | Clarence Valley         | Yes  | Yes   |   | 134                         | 134        | 957        | 145                                      | 260  | 22.7  |                           |                  |              |  |
| 67            | Cobar                   | Yes  | Yes   | Yes                                       | 95                          | 190        | 630        | 87                                       | 175  | 16.0  | 75                        | 100              | 125          |  |
| 10            | Coffs Harbour           | Yes  | Yes   |   | 194                         | 388        | 922        | 135                                      | 166  | 15.3  | 75                        | 96               | 135          |  |
| 99            | Coolamon                |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 50            | Cooma-Monaro            | Yes*   | Yes   |   | 95                          | 95         | 95         | 123                                      | 170  | 15.5  | 235                       | 209              | 109          |  |
| 75            | Coonamble               |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 58            | Cootamundra             | Yes  | Yes   |   | 114                         | 227        | 341        | 114                                      | 200  | 13.0  | 65                        | 85               | 115          |  |
| 42            | Corowa                  | Yes  | Yes   |   | 91                          | 183        | 613        | 85                                       | 170  | 15.7  |                           |                  |              |  |
| 39            | Cowra                   | Yes*   | Yes   |   | 90                          | 180        | 610        | 80                                       | 161  | 14.8  | 73                        | 93               | 130          | Yes  |
| 54            | Deniliquin              | Yes  | Yes   |   | 93                          | 185        | 615        | 87                                       | 170  | 15.6  | 76                        | 98               | 137          |  |
| 18            | Dubbo                   | Yes  | Yes   | Yes                                       | 91                          | 182        | 609        | 85                                       | 183  | 15.6  | 76                        | 99               | 138          | Yes  |
| 26            | Essential Energy        | Yes  | Yes   |   | 106                         | 711        |            | 99                                       | 199  | 18.2  | 89                        | 113              | 159          | Yes  |
| 15            | Eurobodalla             | Yes  | Yes   | Yes                                       | 95                          | 95         | 507        |  | 140  | 13.0  | 82                        | 102              | 133          |  |
| 51            | Forbes                  | Yes  | Yes   |   | 472                         | 472        |            | 132                                      | 70   |   |                           |                  |              |  |
| 84            | Gilgandra               | Yes  | Yes   | Yes                                       | 87                          | 174        | 583        | 81                                       | 168  | 15.4  | 73                        | 94               |              | Yes  |
| 60            | Glen Innes Severn       | Yes  | Yes   |   | 91                          | 182        | 610        | 85                                       | 169  | 15.6  | 76                        | 98               | 138          |  |
| 1             | Gosford                 | Yes  | Yes   | Yes                                       | 73                          | 231        | 1943       | 117                                      | 168  | 14.4  | 75                        | 95               | 134          |  |
| 20            | Goulburn Mulwaree       | Yes  | Yes   | Yes                                       | 100                         | 110        | 366        | 160                                      | 259  | 23.3  | 80                        | 104              | 144          | Yes  |
| 80            | Greater Hume            | Yes  | Yes   |   | 84                          | 170        | 570        | 80                                       | 160  | 13.5  | 70                        | 95               | 130          |  |
| 30            | Griffith                | Yes  | Yes   | Yes                                       | 81                          | 180        | 486        | 65                                       | 122  | 7.0   | 139                       | 138              |              |  |
| 94            | Gundagai                |  | Yes   |   | 190                         | 190        | 190        |  | 316  |   |                           |                  |              |  |
| 44            | Gunnedah                | Yes  | Yes   |   | 177                         | 177        | 343        | 106                                      | 150  | 13.0  | 69                        | 85               | 117          |  |
| 90            | Guyra                   | Yes*   | Yes   | Yes                                       | 147                         | 147        | 147        |  |  |   |                           |                  |              |  |
| 81            | Gwydir                  | Yes  | Yes   |   | 77                          | 77         | 430        | 60                                       | 130  | 15.0  |                           |                  |              |  |
| 76            | Harden                  |  | Yes   |   | 160                         | 160        | 160        | 160                                      | 220  |   |                           |                  |              |  |
| 7             | Port Macquarie-Hastings | Yes  | Yes   | Yes                                       | 188                         | 188        | 580        | 99                                       | 158  | 14.4  | 72                        | 87               | 128          |  |
| 30A           | Hawkesbury              | Yes  | Yes   |   | 776                         | 3890       | 7749       | 87                                       | 131  |   | 289                       | 251              | 354          | Yes  |
| 86            | Hay                     | Yes  | No  | Yes                                       |                             |            |            |  |  |   |                           |                  |              |  |
| 37            | Inverell                |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 106           | Jerilderie              | Yes  | Yes   |   | 75                          | 150        | 300        | 100                                      | 169  | 15.6  | 90                        | 115              | 162          |  |
| 77            | Junee                   | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 25            | Kempsey                 | Yes  | Yes   | Yes                                       | 121                         | 121        | 121        | 144                                      | 206  | 18.8  | 120                       | 229              | 229          |  |
| 70            | Kyogle                  | Yes  | Yes   | Yes                                       | 84                          | 84         | 480        | 68                                       | 103  | 3.0   | 54                        | 69               | 97           |  |



Table 7C: Sewerage - Liquid trade waste fees and charges - 2015-16

| WATER UTILITY           | Does LWU have appropriate Liquid Trade Waste Policy <sup>1,2</sup> ? | Appropriate Trade Waste Fees & Charges (Yes/No) | All liquid trade waste approvals (Yes/No) | ANNUAL TRADE WASTE FEE (\$) |            |            | Reinspection Fee \$/inspection Cat/1/2/3 | Category 2 Trade Waste Usage Charge (c/kL) | Category 2 Non Compliance Trade Waste Usage Charge (\$/kL) (9A) | Excess Mass Charge (c/kg) |                  |              | Non Compliance Excess Mass Charge for BOD (Yes/No) |
|-------------------------|--|---|---|-----------------------------|------------|------------|--|--|---|---------------------------|------------------|--------------|--|
|                         |  |   |   | Category 1                  | Category 2 | Category 3 |  |  |   | BOD                       | Suspended Solids | Oil & Grease |  |
|                         | (1)<br>2014-15   | (2)   | (3)                                       | (4)                         | (6)        | (7)        | (8)                                      | (9)  | (9A)  | (10)                      | (11)             | (12)         | (13)   |
| 59 Lachlan              | Yes  | Yes   | Yes                                       | 149                         | 149        | 149        | 149                                      | 145  | 15.0  |                           |                  |              |  |
| 48 Leeton               | Yes*   | Yes   |   | 161                         | 161        | 615        | 91                                       | 183  | 16.7  | 68                        | 105              | 148          |  |
| 22 Lismore              | Yes*   | Yes   | Yes                                       | 98                          | 98         | 98         | 98                                       | 106  |   | 74                        | 100              | 124          |  |
| 31 Lithgow              | Yes  | Yes   | Yes                                       | 150                         | 223        | 409        | 85                                       | 170  | 17.6  | 75                        | 96               | 135          |  |
| 61 Liverpool Plains     | Yes*   | Yes   |   | 87                          | 87         | 589        | 83                                       | 300  | 14.0  | 200                       | 200              | 300          |  |
| 102 Lockhart            | Yes  | Yes   |   | 69                          | 162        | 462        | 65                                       | 75   | 6.2   | 110                       | 112              |              |  |
| 5 MidCoast              | Yes  | Yes   | Yes                                       | 127                         | 159        | 567        | 108                                      | 263  | 15.7  | 49                        | 49               | 71           | Yes  |
| 32 Mid Western Regional |  | No  | Yes                                       |                             |            |            |  |  |   |                           |                  |              |  |
| 38 Moree Plains         | Yes  | Yes   |   | 93                          | 185        | 617        | 85                                       | 200  | 16.0  | 100                       | 100              | 100          |  |
| 65 Murray               | Yes  | Yes   |   | 91                          | 182        | 608        | 84                                       | 169  | 15.6  | 77                        | 98               | 137          |  |
| 101 Murrumbidgee        | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 41 Muswellbrook         | Yes  | Yes   | Yes                                       | 112                         | 175        | 586        | 161                                      | 131  | 15.8  | 63                        | 83               | 115          | Yes  |
| 34 Nambucca             | Yes  | Yes   | Yes                                       | 94                          | 156        | 156        | 136                                      | 177  | 15.8  | 113                       | 113              |              |  |
| 46 Narrabri             | Yes*   | Yes   | Yes                                       | 580                         | 830        | 860        | 160                                      | 200  |   | 200                       |                  |              |  |
| 63 Narrandera           | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 62 Narromine            | Yes  | Yes   |   | 91                          | 91         | 585        | 84                                       | 205  |   |                           |                  |              |  |
| 83 Oberon               | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 19 Orange               | Yes  | Yes   | Yes                                       | 82                          | 82         | 555        | 77                                       | 216  | 15.6  | 173                       | 160              | 380          | Yes  |
| 71 Palerang             | Yes  | Yes   |   | 95                          | 191        | 637        | 90                                       | 250  | 18.0  | 150                       | 200              | 200          |  |
| 36 Parkes               | Yes  | Yes   | Yes                                       | 190                         | 190        | 680        | 96                                       | 185  | 14.4  |                           |                  |              |  |
| 17 Queanbeyan           | Yes  | Yes   | Yes                                       | 120                         | 120        | 780        | 96                                       | 232  | 19.7  | 257                       | 237              | 165          |  |
| 33 Richmond Valley      | Yes  | Yes   |   | 91                          | 168        | 567        | 159                                      | 162  | 14.9  | 73                        | 94               | 131          |  |
| 3 Shoalhaven            | Yes  | Yes   | Yes                                       | 120                         | 149        | 582        | 74                                       | 168  | 15.7  | 74                        | 94               | 135          |  |
| 35 Singleton            | Yes  | Yes   | Yes                                       | 92                          | 92         | 92         | 150                                      | 152  | 15.5  | 65                        | 80               | 110          |  |
| 52 Snowy River          | Yes  | Yes   |   | 207                         | 805        | 1675       | 140                                      | 180  | 20.0  | 300                       | 200              | 200          |  |
| 13 Tamworth Regional    | Yes  | Yes   | Yes                                       | 143                         | 143        | 633        | 97                                       | 176  | 15.0  | 79                        | 102              | 150          |  |
| 69 Temora               |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 68 Tenterfield          | Yes  | Yes   | Yes                                       | 130                         | 130        | 591        | 80                                       | 149  | 14.9  |                           |                  |              |  |
| 93 Tumbarumba           | Yes  | Yes   | Yes                                       | 69                          | 69         | 69         | 65                                       | 135  | 11.9  | 75                        | 105              | 176          |  |
| 43 Tumut                | Yes  | Yes   | Yes                                       | 145                         | 300        | 610        | 141                                      |  | 14.5  | 165                       | 150              | 270          |  |
| 6 Tweed                 | Yes  | Yes   | Yes                                       | 106                         | 152        | 791        | 99                                       | 210  | 15.0  | 90                        | 110              | 170          |  |
| 45 Upper Hunter         | Yes  | Yes   |   | 398                         | 398        | 398        | 152                                      |  | 17.0  | 76                        | 95               | 130          |  |
| 73 Upper Lachlan        | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 85 Uralla               |  | Yes   | Yes                                       | 72                          | 72         | 72         |  | 125  |   |                           |                  |              |  |
| 107 Urana               |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 9 Wagga Wagga           | Yes  | Yes   | Yes                                       | 98                          | 98         | 639        | 92                                       | 180  | 16.4  | 80                        | 100              | 140          |  |
| 88 Wakool               |  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 98 Walcha               | Yes  | Yes   |   | 83                          | 165        |            | 79                                       | 150  | 13.9  |                           |                  |              |  |
| 79 Walgett              | Yes  | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 96 Warren               | Yes  | Yes   |   | 87                          | 175        | 585        | 79                                       | 178  | 14.6  | 73                        | 100              | 130          |  |
| 55 Warrumbungle         | Yes  | No  |   | 85                          | 85         | 200        | 80                                       | 160  | 14.5  | 73                        | 95               | 132          | Yes  |
| 95 Weddin               | Yes*   | No  |   |                             |            |            |  |  |   |                           |                  |              |  |
| 57 Wellington           | Yes  | Yes   | Yes                                       | 82                          | 82         | 82         | 175                                      | 157  | 15.0  |                           |                  |              |  |
| 74 Wentworth            | Yes  | Yes   |   | 93                          | 186        | 624        | 87                                       | 173  | 16.0  | 78                        | 100              | 100          |  |
| 16 Wingecarribee        | Yes  | Yes   | Yes                                       | 56                          | 174        | 592        | 84                                       | 182  | 16.1  | 76                        | 94               | 140          |  |
| 2 Wyong                 | Yes  | Yes   | Yes                                       | 90                          | 360        | 605        | 84                                       | 148  | 14.4  | 75                        | 96               | 135          | Yes  |
| 56 Yass Valley          | Yes  | Yes   | Yes                                       | 91                          | 283        | 508        |  | 170  |   |                           |                  |              |  |
| 49 Young                | Yes  | Yes   |   | 99                          | 177        | 587        | 99                                       | 156  | 14.4  | 71                        | 91               | 127          | Yes  |

Notes:

- 1. Yes\* in column 1 indicates that the LWU has adopted a trade waste policy before 2009, which needs significant updating.
- 2. 85% of LWUs have an appropriate trade waste policy and 81% of LWUs have appropriate trade waste fees and charges.
- 3. The non-residential sewer usage charges and trade waste usage charges over the last 6 years are shown on Figures 44 and 45 respectively (page 81 and 82).

Table 8: 2014-15 NSW urban water supplied

| WATER UTILITY   |   | POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water) |            |            |       |               |                        |                     |   |  |          |                         | NON-POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water)   |                        |         |                   |                                   |                  | TOTAL URBAN<br>WATER SUPPLIED<br><br>(Potable + Non-potable)<br>including Recycled | BULK<br>WATER<br>EXPORTS<br>(Potable + Non-potable)<br><br>See Table 8A <sup>11</sup><br><br>W14<br>=W14.1+W14.2<br>+W15+W28.1 | RECYCLED WATER  |   | WATER SOURCES<br>FOR URBAN WATER USE (ML)   |   |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |
|---|---|--|------------|------------|-------|---------------|------------------------|---------------------|---|--|----------|-------------------------|--|------------------------|---------|-------------------|-----------------------------------|------------------|--|--|---|---|---|---|---------|--------------|---------------------------|---------------------------|------------|------------|-------------|------------|-------------|-------|-------------|-------------------|-----|
|   |   | REVENUE WATER (Potable)                                    |            |            |       |               |                        |                     | NON-REVENUE WATER<br>(Potable) See Table 8A |  |          |                         | Total Potable<br>Urban Water<br>Supplied<br><br>Revenue + Non-Revenue Water<br><br>W11.1<br>= W8.1 + W9.1 + W10.1<br><br>(7) + (9)<br><br>(10) | Recycled <sup>11</sup> |         |                   | Non-potable<br>excluding recycled |                  |  |  | Total Non-Potable<br><br>Including Recycled<br><br>(11b)+(12c)<br><br>(12d) | NON-URBAN<br><br>See Table 8A <sup>11</sup> | TOTAL<br>(Urban + Non-Urban)<br>see also Table 15<br><br>W22+W23+W24+W25.1<br><br>W26<br><br>(11b)+(11c)<br><br>(11d) | Surface Water<br>Ground Water<br>Recycled Water<br>Bulk Purchase<br>Total Sourced Water<br><br>Excluding Non Urban Recycled<br><br>=Sum (15) to (17)<br><br>(15b)<br>W4<br><br>(17b)<br>W5<br><br>(17b)<br>W7 |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |
|   |   | Residential  | Commercial | Industrial | Rural | Institutional | Public Parks & Gardens | Total Revenue Water | Losses                                      |  | Unbilled | Total Non-Revenue Water |  | Res                    | Non Res | Total Non Potable | W20                               | W21 + W25- W25.1 |  |  |   |   |   | W20+W21+W2 5-W25.1  | W8.2    | W9.2 + W10.2 | W11.2 = W8.2 +W9.2+W1 0.2 | W20+W21 +W25-W25.1 +W11.2 | (15)<br>W1 | (16)<br>W2 | (16b)<br>W4 | (17)<br>W5 | (17b)<br>W7 |       |             |                   |     |
|   |   |  |            |            |       |               |                        |                     | Real Loss (Leakage) <sup>8</sup>            | Apparent Loss (illegal use, meter error) |          |                         |  |                        |         |                   |                                   |                  |  |  |   |   |   |   |         |              |                           |                           |            |            |             |            |             | W10.1 | W8.1 + W9.1 | W22+W23+W24+W25.1 | W26 |
|   |   |  |            |            |       |               |                        |                     |   |  |          |                         |  |                        |         |                   |                                   |                  |  |  |   |   |   |   |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |
|   | Sydney Water                              | 351,000  |            |            |       |               |                        | 464,000             |   |  |          |                         | 464,000  | 2,100                  | 9,700   | 11,800            | 0                                 | 1200             | 1200   | 13000  | 529,000   | 0   |   | 43,100  | 6,500   | 0            | 38,300                    | 510,000                   | 554,000    |            |             |            |             |       |             |                   |     |
|   | Hunter Water                              | 38,000   |            |            |       |               |                        | 56,000              |   |  |          | 11,000                  | 67,000   | 0                      | 2,900   | 2,900             | 0                                 | 0                |  | 2900   | 70,000  | 380   |   | 4,600   | 64,300  | 2,700        | 3,000                     | 0                         | 70,000     |            |             |            |             |       |             |                   |     |
|   | Water NSW                                 |  |            |            |       |               |                        |                     |   |  |          |                         |  |                        |         |                   |                                   |                  |  | 538,000  | 521,000   |   |   |   | 888,100 | 0            |                           | 2,000                     | 890,000    |            |             |            |             |       |             |                   |     |
| LWUs with > 10,000 Properties   |   |  |            |            |       |               |                        |                     |   |  |          |                         |  |                        |         |                   |                                   |                  |  |  |   |   |   |   |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |
| 1   | Gosford                                   | 10,955   | 1,279      | 563        | 10    | 481           | 174                    | 13,462              | 1,418                                       | 290                                      | 76       | 1,784                   | 15,246   | 19                     | 19      | 70                | 70                                | 89               | 15,359   | 286  |   | 19  | 13,103  | 71  | 13      | 2,429        | 15,640                    |                           |            |            |             |            |             |       |             |                   |     |
| 2   | Wyong                                     | 9,132  | 2,548      | 179        | 43    | 433           | 89                     | 12,424              | 696   | 802                                      | 0        | 1,498                   | 13,922   | 521                    | 521     | 1                 | 0                                 | 1                | 14,444   | 2,650  | 238   | 759   | 15,763  | 2   | 911     | 551          | 17,227                    |                           |            |            |             |            |             |       |             |                   |     |
| 3   | Shoalhaven                                | 6,273  | 1,685      | 1,255      | 620   | 279           | 75                     | 10,187              | 1,596                                       | 215                                      | 67       | 1,878                   | 12,065   | 178                    | 178     | 3                 | 1,923                             | 1,926            | 2,104  | 14,169   |   | 1,527                                       | 1,705   | 13,740  |         | 173          | 77                        | 13,990                    |            |            |             |            |             |       |             |                   |     |
| 4   | Rous (Bulk Supplier) (NO SGE)             | 0  | 38         | 0          | 768   | 0             | 0                      | 806                 | 230   | 225                                      | 53       | 508                     | 1,314  |                        |         |                   |                                   |                  | 1,314  | 9,869  |   |   | 11,183  |   |         |              |                           | 11,183                    |            |            |             |            |             |       |             |                   |     |
| 5   | MidCoast                                  | 5,102  | 1,547      | 497        | 0     | 148           | 104                    | 7,398               | 812   | 359                                      | 175      | 1,346                   | 8,744  | 412                    | 412     |                   |                                   |                  | 412  | 9,156  |   | 529   | 941   | 7,845   | 526     | 373          |                           | 8,744                     |            |            |             |            |             |       |             |                   |     |
| 6   | Tweed                                     | 5,545  | 1,443      | 182        | 117   | 232           | 123                    | 7,642               | 520   | 461                                      | 43       | 1,024                   | 8,666  | 500                    | 500     |                   |                                   |                  | 500  | 9,166  | 0   | 51  | 551   | 9,284   |         | 385          | 5                         | 9,674                     |            |            |             |            |             |       |             |                   |     |
| 7   | Port Macquarie-Hastings (Unfiltered)      | 4,188  | 947        | 29         | 35    | 252           | 56                     | 5,507               | 456   | 127                                      | 28       | 611                     | 6,118  | 299                    | 299     | 195               | 195                               | 494              | 6,612  |  | 87  | 386   | 5,990   |   | 189     |              |                           | 6,179                     |            |            |             |            |             |       |             |                   |     |
| 8   | Riverina (Groundwater) (NO SGE)           | 8,513  | 1,977      | 1,251      | 1,017 | 687           | 616                    | 14,061              | 937   | 551                                      | 74       | 1,562                   | 15,623   |                        |         |                   |                                   |                  | 15,623   |  |   |   | 2,183   | 12,596  |         |              | 32                        | 14,811                    |            |            |             |            |             |       |             |                   |     |
| 10  | Coffs Harbour                             | 3,912  | 1,147      | 0          | 0     | 63            | 90                     | 5,212               | 444   | 86                                       | 42       | 572                     | 5,784  | 309                    | 309     | 9                 | 9                                 | 318              | 6,102  |  | 704   | 1,013                                       | 5,688   |   |         |              |                           | 5,688                     |            |            |             |            |             |       |             |                   |     |
| 11  | Albury                                    | 4,835  | 585        | 223        | 38    | 600           | 387                    | 6,668               | 445   | 261                                      | 35       | 741                     | 7,409  |                        |         | 1                 | 217                               | 218              | 7,627  | 379  | 2,398   | 2,398                                       | 6,238   |   |         |              |                           | 6,238                     |            |            |             |            |             |       |             |                   |     |
| 12  | Fish River WS (Unfiltered, Bulk Supplier) | 0  | 0          | 0          | 120   | 0             | 0                      | 120                 | 1,555                                       |  | 0        | 1,555                   | 1,675  |                        |         | 1,024             | 1,024                             | 1,024            | 2,699  | 2,793  |   |   | 5,961   |   |         |              |                           | 5,961                     |            |            |             |            |             |       |             |                   |     |
| 13  | Tamworth Regional                         | 3,691  | 1,063      | 1,666      | 151   | 49            | 424                    | 7,044               | 548   | 235                                      | 0        | 783                     | 7,827  |                        |         | 140               | 140                               | 140              | 7,967  |  | 4,278   | 4,278                                       | 6,890   | 1,045   |         |              |                           | 7,935                     |            |            |             |            |             |       |             |                   |     |
| 14  | Clarence Valley                           | 2,793  | 747        | 368        | 488   | 0             | 93                     | 4,489               | 850   | 253                                      | 450      | 1,553                   | 6,042  | 195                    | 195     | 47                | 47                                | 242              | 6,284  |  |   | 195   | 5,894   |   | 195     |              |                           | 6,089                     |            |            |             |            |             |       |             |                   |     |
| 15  | Eurobodalla                               | 2,112  | 468        | 6          | 13    | 125           | 19                     | 2,743               | 329   | 204                                      | 17       | 550                     | 3,293  | 223                    | 223     |                   |                                   |                  | 3,516  |  | 20  | 243   | 3,132   | 161   | 243     |              |                           | 3,536                     |            |            |             |            |             |       |             |                   |     |
| 16  | Wingecarribee                             | 3,092  | 537        | 0          | 141   | 250           | 20                     | 4,040               | 400   | 67                                       | 28       | 495                     | 4,535  |                        |         |                   |                                   |                  | 4,535  |  | 164   | 164   | 515   |   | 163     | 4,447        |                           | 5,125                     |            |            |             |            |             |       |             |                   |     |
| 17  | Queanbeyan (Reticulator)                  | 2,837  | 253        | 140        | 0     | 69            | 145                    | 3,444               | 375   | 73                                       | 45       | 493                     | 3,937  |                        |         |                   |                                   |                  | 3,937  |  |   |   |   |   |         |              | 3,937                     | 3,937                     |            |            |             |            |             |       |             |                   |     |
| 18  | Dubbo                                     | 5,088  | 1,043      | 32         | 39    | 605           | 734                    | 7,541               | 670   | 124                                      | 44       | 838                     | 8,379  |                        |         | 208               | 208                               | 208              | 8,587  |  | 2,183   | 2,183                                       | 6,148   | 1,999   |         |              |                           | 8,147                     |            |            |             |            |             |       |             |                   |     |
| 19  | Orange                                    | 2,717  | 670        | 79         | 115   | 201           | 50                     | 3,832               | 403   | 81                                       | 165      | 649                     | 4,481  | 2,826                  | 2,826   |                   |                                   | 2,826            | 7,307  |  |   | 2,826                                       | 4,748   | 53  | 2,826   |              |                           | 7,627                     |            |            |             |            |             |       |             |                   |     |
| 20  | Goulburn Mulwaree                         | 1,403  | 234        | 270        | 9     | 264           | 45                     | 2,225               | 258   | 48                                       | 13       | 319                     | 2,544  | 194                    | 194     | 10                | 10                                | 204              | 2,748  | 2  | 1,612   | 1,806                                       | 2,558   |   |         | 46           |                           | 2,604                     |            |            |             |            |             |       |             |                   |     |
| 21  | Bathurst Regional                         | 3,206  | 1,131      | 1,003      | 22    | 0             | 0                      | 5,362               | 416   | 167                                      | 0        | 583                     | 5,945  |                        |         | 32                | 1,042                             | 1,074            | 7,019  | 6  | 3,712   | 3,712                                       | 6,642   | 31  | 653     |              |                           | 7,326                     |            |            |             |            |             |       |             |                   |     |
| 22  | Lismore (Reticulator)                     | 1,959  | 788        | 0          | 116   | 0             | 0                      | 2,863               | 194   | 121                                      | 0        | 315                     | 3,178  |                        |         |                   |                                   |                  | 3,178  |  | 5   | 5   | 195   |   |         | 3,238        |                           | 3,433                     |            |            |             |            |             |       |             |                   |     |
| 23  | Bega Valley (Unfiltered)                  | 1,811  | 445        | 72         | 5     | 182           | 43                     | 2,558               | 213   | 217                                      | 49       | 479                     | 3,037  | 367                    | 367     | 57                | 57                                | 424              | 3,461  |  | 79  | 446   | 1,635   | 1,402   | 436     |              |                           | 3,473                     |            |            |             |            |             |       |             |                   |     |
| 24  | Ballina (Reticulator)                     | 2,345  | 372        | 16         | 43    | 106           | 10                     | 2,892               | 729   | 62                                       | 19       | 810                     | 3,702  | 517                    | 517     |                   |                                   |                  | 517  | 4,219  |   |   | 517   | 132   |         | 575          | 3,604                     | 4,311                     |            |            |             |            |             |       |             |                   |     |
| 25  | Kempsey (Groundwater)                     | 1,705  | 426        | 241        | 448   | 129           | 11                     | 2,960               | 409   | 206                                      | 141      | 756                     | 3,716  | 60                     | 60      |                   |                                   | 60               | 3,776  | 27   | 17  | 77  |   | 3,530   | 77      |              |                           | 3,607                     |            |            |             |            |             |       |             |                   |     |
| 26  | Essential Energy                          | 2,471  | 280        | 1,182      | 0     | 270           | 27                     | 4,230               | 310   | 155                                      | 0        | 465                     | 4,695  | 776                    | 776     | 872               | 872                               | 1,648            | 6,343  |  |   | 776   | 907   |   | 525     | 4,185        |                           | 5,617                     |            |            |             |            |             |       |             |                   |     |
| 27  | Byron (Reticulator)                       | 1,758  | 777        | 0          | 0     | 0             | 0                      | 2,535               | 193   | 83                                       | 0        | 276                     | 2,811  | 288                    | 288     | 285               | 285                               | 573              | 3,384  |  | 156   | 444   | 370   |   | 285     | 2,371        |                           | 3,026                     |            |            |             |            |             |       |             |                   |     |
| 28A   | Goldenfields (Reticulator) (NO SGE)       | 1,918  | 625        | 10         | 2,430 | 304           | 157                    | 5,444               | 363   | 176                                      | 66       | 605                     | 6,049  |                        |         | 22                | 112                               | 134              | 6,183  |  |   |   |   |   |         |              | 5,759                     | 5,759                     |            |            |             |            |             |       |             |                   |     |
| 28B   | Goldenfields (Bulk Supplier) (NO SGE)     | 0  | 0          | 0          | 0     | 0             | 0                      |                     | 440   |  | 0        | 440                     | 440  |                        |         |                   |                                   |                  | 440  | 8,988  |   |   | 4,136   | 4,435   |         | 417          |                           | 8,988                     |            |            |             |            |             |       |             |                   |     |
| Totals (excluding bulk suppliers)<br>for LWUs with >10,000 Properties |   |  |            |            |       |               |                        |                     |   |  |          |                         | 171,180  | 0                      | 7,684   | 7,684             | 58                                | 6,213            | 6,271  | 13,955   | 184,720   | 25,000                                      | 17,760  | 25,444  | 140,880 | 25,851       | 8,022                     | 31,098                    | 205,875    |            |             |            |             |       |             |                   |     |
| LWUs with 3,001 - 10,000 Properties                                   |   |  |            |            |       |               |                        |                     |   |  |          |                         |  |                        |         |                   |                                   |                  |  |  |   |   |   |   |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |
| 29  | Armidale Dumaresq                         | 1,598  | 249        | 0          | 92    | 444           | 55                     | 2,438               | 366   | 52                                       | 0        | 418                     | 2,856  |                        |         | 64                | 64                                | 64               | 2,920  |  |   | 910   | 910   | 2,920   |         |              |                           |                           | 2,920      |            |             |            |             |       |             |                   |     |
| 30  | Griffith                                  | 3,738  | 1,216      | 0          | 377   | 261           | 260                    | 5,852               | 390   | 130                                      | 123      | 643                     | 6,495  |                        |         | 155               | 565                               | 720              | 7,215  |  |   | 158   | 158   |   |         | 6,606        |                           |                           | 6,606      |            |             |            |             |       |             |                   |     |
| 31  | Lithgow                                   | 999  | 309        | 61         |       |               |                        | 1,369               | 91  | 61                                       |          | 152                     | 1,521  |                        |         | 1                 | 1                                 | 1                | 1,522  |  |   |   |   | 1,298   |         | 693          |                           |                           | 1,991      |            |             |            |             |       |             |                   |     |
| 32  | Mid-Western Regional                      | 1,364  | 494        | 48         | 17    | 152           | 62                     | 2,136               | 172   | 160                                      | 12       | 344                     | 2,480  |                        |         | 0                 | 94                                | 94               | 2,575  |  |   | 2   | 2   | 2,2851  |         |              |                           |                           |            |            |             |            |             |       |             |                   |     |



Table 8: 2014-15 NSW urban water supplied

| WATER UTILITY  |                             | POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water) |            |                |       |               |                                 |                           |   |   |          |                                   | NON-POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water)              |                        |            |                      |                                   |       | TOTAL URBAN<br>WATER SUPPLIED<br><br>(Potable + Non-potable)<br>including Recycled | BULK<br>WATER<br>EXPORTS<br>(Potable + Non-potable)<br><br>See Table 8A <sup>11</sup><br><br>W14<br>=W14.1+W14.2<br>+W15+W28.1 | RECYCLED WATER                              |   | WATER SOURCES<br>FOR URBAN WATER USE (ML)         |                  |                 |                   |                  |   |                   |                      |
|--|-----------------------------|--|------------|----------------|-------|---------------|---------------------------------|---------------------------|---|---|----------|-----------------------------------|---|------------------------|------------|----------------------|-----------------------------------|-------|--|--|---|---|---|------------------|-----------------|-------------------|------------------|---|-------------------|----------------------|
|  |                             | REVENUE WATER (Potable)                                    |            |                |       |               |                                 |                           | NON-REVENUE WATER<br>(Potable) See Table 8A |   |          |                                   | Total Potable<br>Urban Water<br>Supplied<br><br>Revenue + Non-Revenue Water | Recycled <sup>11</sup> |            |                      | Non-potable<br>excluding recycled |       |  |  | Total Non-Potable<br><br>Including Recycled | NON-URBAN<br><br>See Table 8A <sup>11</sup> | TOTAL<br>(Urban + Non-Urban)<br>see also Table 15 | Surface<br>Water | Ground<br>Water | Recycled<br>Water | Bulk<br>Purchase | Total Sourced<br>Water<br><br>Excluding Non<br>Urban Recycled |                   |                      |
|  |                             | Residential  | Commercial | Industrial     | Rural | Institutional | Public<br>Parks<br>&<br>Gardens | Total<br>Revenue<br>Water | Losses                                      |   | Unbilled | Total<br>Non-<br>Revenue<br>Water |   | Res                    | Non<br>Res | Total Non<br>Potable | W22+<br>W23+<br>W24+<br>W25.1     | W26   |  |  |   |   |   |                  |                 |                   |                  |   | Urban Use<br>Only | =Sum (15) to<br>(17) |
|  |                             |  |            |                |       |               |                                 |                           | Real Loss<br>(Leakage) <sup>8</sup>         | Apparent<br>Loss<br>(illegal use,<br>meter error) |          |                                   |   |                        |            |                      |                                   |       |  |  |   |   |   |                  |                 |                   |                  |   |                   |                      |
|  |                             | W8.1   | W9.1       | W8.1 +<br>W9.1 | (8)   | (8a)          | (8b)                            | (9)                       | (10)  | (11)  | (11a)    | (11b)                             | (12a)   | (12b)                  | (12c)      | (12d)                | (13)                              | (14)  |  |  | (11c)                                       | (11d)                                       | (15)<br>W1  | (16)<br>W2       | (16b)<br>W4     | (17)<br>W5        | (17b)<br>W7      |   |                   |                      |
| (1)  | (2)                         | (3)  | (4)        | (5)            | (6)   | (7)           | (8)                             | (8a)                      | (8b)  | (9)   | (10)     | (11)                              | (11a)   | (11b)                  | (12a)      | (12b)                | (12c)                             | (12d) | (13)   | (14)   | (11c)                                       | (11d)                                       | (17b)<br>W7                                       |                  |                 |                   |                  |   |                   |                      |
| 38   | Moree Plains (Groundwater)  | 2,123  | 305        | 0              | 38    | 0             | 63                              | 2,529                     | 288   | 120   | 25       | 433                               | 2,962   | 322                    | 322        | 38                   | 13                                | 51    | 373  | 3,335  | 25  | 471   | 793   | 433              | 2,803           | 827               |                  | 4,063   |                   |                      |
| 39   | Cowra                       | 1,032  | 638        | 175            | 0     | 18            | 41                              | 1,904                     | 220   | 0   | 774      | 994                               | 2,898   |                        |            | 116                  |                                   | 116   | 116  | 3,014  | 5   |   |   | 2,878            |                 | 141               |                  | 3,019   |                   |                      |
| 40   | Central Tablelands (NO SGE) | 756  | 208        | 193            | 301   | 43            | 18                              | 1,519                     | 121   | 2   | 70       | 193                               | 1,712   |                        |            |                      |                                   |       |  | 1,712  | 141   |   |   | 1,787            | 198             |                   |                  | 1,985   |                   |                      |
| 41   | Muswellbrook                | 1,315  | 338        | 23             | 0     | 134           | 77                              | 1,887                     | 126   | 74  | 10       | 210                               | 2,097   | 892                    | 892        |                      |                                   |       | 892  | 2,989  |   |   | 892   | 2,100            | 29              |                   |                  | 2,129   |                   |                      |
| 42   | Corowa                      | 1,413  | 289        | 998            | 2     | 17            | 86                              | 2,805                     | 223   | 74  | 14       | 311                               | 3,116   |                        |            |                      |                                   |       |  | 3,116  |   | 184   | 184   | 3,077            | 26              |                   |                  | 3,103   |                   |                      |
| 43   | Tumut                       | 863  | 105        | 209            | 53    | 29            | 28                              | 1,287                     | 114   | 23  | 6        | 143                               | 1,430   | 94                     | 94         | 5                    | 45                                | 50    | 144  | 1,574  |   | 7   | 101   | 1,397            |                 | 132               |                  | 1,529   |                   |                      |
| 44   | Gunnedah (Groundwater)      | 1,698  | 823        | 0              | 55    | 190           | 90                              | 2,856                     | 124   | 124   | 0        | 248                               | 3,104   |                        |            |                      |                                   |       |  | 3,104  |   | 603   | 603   |                  | 2,553           |                   |                  | 2,553   |                   |                      |
| 45   | Upper Hunter                | 1,247  | 196        | 549            | 5     | 50            | 101                             | 2,148                     | 373   | 54  | 0        | 427                               | 2,575   | 125                    | 125        |                      |                                   |       | 125  | 2,700  |   | 1   | 126   | 2,165            | 410             | 125               |                  | 2,700   |                   |                      |
| 46   | Narrabri (Groundwater)      | 1,185  | 805        | 0              | 0     | 4             | 12                              | 2,006                     | 292   | 292   | 18       | 602                               | 2,608   |                        |            |                      |                                   |       |  | 2,608  |   | 432   | 432   |                  | 2,372           |                   |                  | 2,372   |                   |                      |
| 47   | Bellingen (Unfiltered)      | 555  | 107        | 99             | 125   | 33            | 36                              | 955                       | 110   | 27  | 12       | 149                               | 1,104   |                        |            |                      | 34                                | 34    | 34   | 1,138  | 2   |   |   | 164              | 959             |                   |                  | 1,123   |                   |                      |
| 48   | Leeton                      | 1,528  | 180        | 185            | 64    | 68            | 372                             | 2,397                     | 243   | 60  | 0        | 303                               | 2,700   |                        |            |                      |                                   |       |  | 2,700  |   |   |   | 2,397            |                 |                   |                  | 2,397   |                   |                      |
| 49   | Young (Reticulator)         | 687  | 160        | 110            | 0     | 65            | 99                              | 1,121                     | 92  | 26  | 6        | 124                               | 1,245   | 176                    | 176        |                      |                                   |       | 176  | 1,421  |   | 4   | 180   |                  |                 | 180               | 1,311            | 1,491   |                   |                      |
| 50   | Cooma-Monaro                | 1,090  | 140        | 55             | 65    | 15            | 15                              | 1,380                     | 92  | 61  | 0        | 153                               | 1,533   |                        |            |                      |                                   |       |  | 1,533  |   | 5   | 5   | 1,040            | 36              |                   |                  | 1,076   |                   |                      |
| 51   | Forbes                      | 1,177  | 529        | 0              | 0     | 98            | 28                              | 1,832                     | 123   | 58  | 44       | 225                               | 2,057   |                        |            |                      | 292                               | 292   | 292  | 2,349  | 358   | 9   | 9   | 2,466            | 190             |                   |                  | 2,656   |                   |                      |
| 52   | Snowy River (Unfiltered)    | 404  | 38         | 27             | 3     | 60            | 1                               | 533                       | 73  | 0   | 0        | 73                                | 606   | 39                     | 39         |                      |                                   |       | 39   | 645  | 5   |   | 39  | 745              |                 | 39                |                  | 784   |                   |                      |
| 53   | Berrigan (Dual Supply)      | 750  | 180        | 0              | 22    | 110           | 60                              | 1,122                     | 115   | 14  | 0        | 129                               | 1,251   | 590                    | 590        | 490                  | 214                               | 704   | 1,294  | 2,545  |   |   | 590   | 1,590            |                 |                   |                  | 1,590   |                   |                      |
| 54   | Deniliquin                  | 1,450  | 220        | 0              | 0     | 0             | 25                              | 1,695                     | 150   | 37  | 0        | 187                               | 1,882   |                        |            |                      |                                   |       |  | 1,882  |   | 54  | 54  | 2,315            |                 |                   |                  | 2,315   |                   |                      |
| 55   | Warrumbungle                | 543  | 205        | 0              | 0     | 0             | 0                               | 748                       | 239   | 13  | 0        | 252                               | 1,000   |                        |            | 10                   |                                   | 10    | 10   | 1,010  |   | 59  | 59  | 717              | 553             |                   |                  | 1,270   |                   |                      |
| 56   | Yass Valley                 | 480  | 125        | 0              | 0     | 0             | 30                              | 635                       | 106   | 3   | 100      | 209                               | 844   |                        |            |                      |                                   |       |  | 844  | 4   |   |   | 821              | 27              |                   |                  | 848   |                   |                      |
| Totals (excluding bulk suppliers)<br>for 3,000 - 10,000 Properties |                             |  |            |                |       |               |                                 |                           |   |   |          |                                   | 61,370  | 0                      | 2,423      | 2,423                | 835                               | 4,359 | 5,195  | 7,618  | 68,990                                      | 553   | 3,385   | 5,808            | 40,797          | 13,769            | 1,398            | 12,166  | 68,130            |                      |
| LWUs with 1,501 - 3,000 Properties                                 |                             |  |            |                |       |               |                                 |                           |   |   |          |                                   |   |                        |            |                      |                                   |       |  |  |   |   |   |                  |                 |                   |                  |   |                   |                      |
| 57   | Wellington                  | 548  | 450        | 0              | 0     | 28            | 20                              | 1,046                     | 90  | 156   | 3        | 249                               | 1,295   |                        |            |                      |                                   |       |  | 1,295  |   |   |   | 1,196            | 36              |                   |                  | 1,232   |                   |                      |
| 58   | Cootamundra (Reticulator)   | 507  | 57         | 29             | 1     | 50            | 8                               | 652                       | 75  | 11  | 30       | 116                               | 768   | 138                    | 138        |                      |                                   |       | 138  | 906  |   |   | 348   | 486              |                 |                   | 757              | 757   |                   |                      |
| 59   | Lachlan                     | 1,123  | 634        | 0              |       |               |                                 | 1,793                     | 134   | 79  |          | 213                               | 2,006   |                        |            | 29                   |                                   | 29    | 29   | 2,035  |   |   | 116   | 116              |                 |                   |                  |   |                   |                      |
| 60   | Glen Innes Severn           | 341  | 90         | 0              | 0     | 28            | 1                               | 460                       | 38  | 11  | 1        | 50                                | 510   |                        |            |                      |                                   |       |  | 510  |   |   |   | 489              | 12              |                   |                  | 501   |                   |                      |
| 61   | Liverpool Plains            | 501  | 75         | 45             | 16    | 24            | 75                              | 736                       | 95  | 25  | 5        | 125                               | 861   |                        |            | 9                    |                                   | 9     | 9  | 870  | 50  |   |   | 261              | 721             |                   |                  | 982   |                   |                      |
| 62   | Narromine (Groundwater)     | 840  | 180        | 0              | 5     | 20            | 15                              | 1,060                     | 133   | 18  | 8        | 159                               | 1,219   |                        |            | 73                   |                                   | 73    | 73   | 1,292  |   |   |   | 73               | 1,332           |                   |                  | 1,405   |                   |                      |
| 63   | Narrandera (Groundwater)    | 1,219  | 688        | 0              |       |               |                                 | 1,946                     | 146   | 86  |          | 232                               | 2,177   |                        |            |                      |                                   |       |  | 2,177  |   |   | 3   | 3                |                 |                   |                  |   |                   |                      |
| 65   | Murray (Dual Supply)        | 453  | 193        | 3              | 2     | 10            | 1                               | 662                       | 92  | 16  | 0        | 108                               | 770   |                        |            | 302                  | 204                               | 506   | 506  | 1,275  |   | 90  | 90  | 1,683            |                 |                   |                  | 1,683   |                   |                      |
| 66   | Cobar WB (NO SGE)           |  |            |                |       |               |                                 | 273                       | 20  | 12  |          | 32                                | 305   |                        |            | 37                   |                                   | 37    | 37   | 342  |   |   |   | 4,569            |                 |                   |                  | 4,569   |                   |                      |
| 67   | Cobar                       | 658  | 76         | 36             | 20    | 14            | 49                              | 853                       | 57  | 38  | 0        | 95                                | 948   |                        |            |                      |                                   |       |  | 948  |   |   |   | 1,222            |                 |                   |                  | 1,222   |                   |                      |
| 68   | Tenterfield                 | 249  | 62         | 2              | 2     | 2             | 4                               | 321                       | 21  | 14  | 0        | 35                                | 356   | 44                     | 44         |                      |                                   |       | 44   | 400  | 60  |   | 44  | 444              |                 | 14                |                  | 458   |                   |                      |
| 70   | Kyogle                      | 241  | 45         | 28             | 29    | 22            | 7                               | 372                       | 25  | 17  | 0        | 42                                | 414   | 80                     | 80         |                      |                                   |       | 80   | 494  |   |   | 80  | 313              | 12              |                   | 59               | 384   |                   |                      |
| 71   | Palerang                    | 320  | 70         | 0              | 1     | 1             | 1                               | 393                       | 74  | 21  | 3        | 98                                | 491   | 58                     | 58         |                      |                                   |       | 58   | 549  |   | 27  | 85  | 213              | 278             |                   |                  | 491   |                   |                      |
| 73   | Upper Lachlan               | 250  | 25         | 0              | 0     | 15            | 30                              | 320                       | 23  | 30  | 15       | 68                                | 388   |                        |            |                      |                                   |       |  | 388  |   | 50  | 50  | 435              | 20              |                   |                  | 455   |                   |                      |
| 74   | Wentworth (Dual Supply)     | 212  | 160        | 0              |       |               |                                 | 372                       | 25  | 17  |          | 42                                | 414   |                        |            | 869                  |                                   | 869   | 869  | 1,283  |   |   |   | 2,271            |                 |                   |                  | 2,271   |                   |                      |
| 76   | Harden (Reticulator)        | 220  | 3          | 0              | 387   | 6             | 6                               | 620                       | 41  | 22  | 6        | 69                                | 689   | 34                     | 34         |                      |                                   |       | 34   | 723  |   |   | 34  |                  | 34              |                   | 514              | 548   |                   |                      |
| 75   | Coonamble (Groundwater)     | 882  | 50         | 0              | 58    | 21            | 100                             | 1,111                     | 74  | 49  | 0        | 123                               | 1,234   |                        |            |                      |                                   |       |  | 1,234  | 5   | 59  | 59  |                  | 1,146           |                   |                  | 1,146   |                   |                      |
| 79   | Walgett (Dual Supply)       | 1,160  | 875        | 0              | 0     | 0             | 0                               | 2,035                     | 140   | 81  | 0        | 221                               | 2,256   |                        |            | 1,000                |                                   | 1,000 | 1,000  | 3256   |   |   |   | 1,020            | 600             |                   |                  | 1,620   |                   |                      |
| 80   | Greater Hume                | 371  | 55         | 0              | 50    | 4             | 6                               | 486                       | 65  | 16  | 20       | 101                               | 587   | 61                     | 61         |                      |                                   |       | 61   | 648  |   |   | 61  |                  | 169             | 61                | 379              | 609   |                   |                      |
| Totals (excluding bulk suppliers)<br>for 1,500 - 3,000 Properties  |                             |  |            |                |       |               |                                 |                           |   |   |          |                                   | 17,690  | 0                      | 415        | 415                  | 2,237                             | 286   | 2,523  | 2,938  | 20,620                                      | 115   | 693   | 1,108            | 14,189          | 4,326             | 95               | 1,723   | 20,333            |                      |



Table 8: 2014-15 NSW urban water supplied

| WATER UTILITY  | POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water) |            |            |        |               |                                 |                           |   |   |          |   |                                   | NON-POTABLE URBAN WATER SUPPLIED<br>(ML) (Excludes bulk water) |                                   |                      |   |   |   | TOTAL URBAN<br>WATER SUPPLIED<br><br>(Potable + Non-potable)<br>including Recycled | BULK<br>WATER<br>EXPORTS<br>(Potable + Non-potable)<br><br>See Table 8A <sup>11</sup><br><br>W14<br>=W14.1+W14.2<br>+W15+W28.1 | RECYCLED WATER   |                 | WATER SOURCES<br>FOR URBAN WATER USE (ML) |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
|--|--|------------|------------|--------|---------------|---------------------------------|---------------------------|---|---|----------|---|-----------------------------------|--|-----------------------------------|----------------------|---|---|---|--|--|------------------|-----------------|---|------------------|---|-------------------------------|-------------|-------------|--------|-------|------------|------------|-------------|------------|-------------|--|-------|-----------------------------------|-----|------------------------|-----------------------|------|-----------------|------------------------------------|---------------------------------|---|------------|------|-------|-------|------------|------------|-------------|------------|-------------|
|  | REVENUE WATER (Potable)                                    |            |            |        |               |                                 |                           | NON-REVENUE WATER<br>(Potable) See Table 8A |   |          | Total Potable<br>Urban Water<br>Supplied<br><br>Revenue + Non-Revenue Water | Recycled <sup>11</sup>            |  | Non-potable<br>excluding recycled |                      | Total Non-Potable<br><br>Including Recycled | NON-URBAN<br><br>See Table 8A <sup>11</sup> | TOTAL<br>(Urban + Non-Urban)<br>see also Table 15 |  |  | Surface<br>Water | Ground<br>Water | Recycled<br>Water                         | Bulk<br>Purchase | Total Sourced<br>Water<br><br>Excluding Non Urban Recycled<br><br>=Sum (15) to (17) |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
|  | Residential  | Commercial | Industrial | Rural  | Institutional | Public<br>Parks<br>&<br>Gardens | Total<br>Revenue<br>Water | Losses                                      |   | Unbilled |   | Total<br>Non-<br>Revenue<br>Water | Res  | Non<br>Res                        | Total Non<br>Potable |   |   |   |  |  |                  |                 |   |                  |   | W22+<br>W23+<br>W24+<br>W25.1 | W26         | (11b)+(11c) | (11c)  | (11d) | (15)<br>W1 | (16)<br>W2 | (16b)<br>W4 | (17)<br>W5 | (17b)<br>W7 |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
|  |  |            |            |        |               |                                 |                           | Real Loss<br>(Leakage) <sup>8</sup>         | Apparent<br>Loss<br>(illegal use,<br>meter error) |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             | (Fire Fighting,<br>Flushing,<br>Public<br>Amenities) | W10.1 | W11.1<br>= W8.1 + W9.1 +<br>W10.1 | W20 | W21 +<br>W25-<br>W25.1 | W20+W21+W2<br>5-W25.1 | W8.2 | W9.2 +<br>W10.2 | W11.2<br>= W8.2<br>+W9.2+W1<br>0.2 | W20+W21<br>+W25-W25.1<br>+W11.2 | W11<br>=W11.1+W11.2+<br>W20+W21+W25-<br>W25.1+W28.4 | (10)+(12d) | (14) | (11c) | (11d) | (15)<br>W1 | (16)<br>W2 | (16b)<br>W4 | (17)<br>W5 | (17b)<br>W7 |
|  |  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| (1)  | (2)  | (3)        | (4)        | (5)    | (6)           | (7)                             | (8)                       | (8a)  | (8b)  | (9)      | (10)  | (11)                              | (11a)  | (11b)                             | (12a)                | (12b)                                       | (12c)                                       | (12d)   | (13)   | (14)   | (11c)            | (11d)           | (15)<br>W1                                | (16)<br>W2       | (16b)<br>W4   | (17)<br>W5                    | (17b)<br>W7 |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| LWUs with 200 - 1,500 Properties   |  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 81   | Gwydir   | 408        | 72         | 0      | 11            | 44                              | 165                       | 700   | 48  | 13       | 35  | 96                                | 796  | 20                                | 20                   |   |   |   |  | 20   | 816              |                 |   |                  | 20  | 388                           | 356         | 20          |        | 764   |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 83   | Oberon (Reticulator)                                       | 162        | 25         | 385    | 4             | 15                              | 21                        | 612   | 49  | 28       | 15  | 92                                | 704  |                                   |                      |   | 15  | 15  | 15   | 719  |                  |                 |   |                  | 627   |                               |             |             |        | 627   |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 84   | Gilgandra (Groundwater)                                    | 625        | 179        | 6      | 0             | 10                              | 13                        | 833   | 67  | 21       | 4   | 92                                | 925  |                                   |                      | 5   |   | 5   | 5  | 930  |                  | 238             | 238                                       |                  | 837   |                               |             |             |        | 837   |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 85   | Uralla   | 241        | 33         | 0      | 0             | 1                               | 15                        | 290   | 9   | 3        | 18  | 30                                | 320  |                                   |                      |   |   |   |  | 320  |                  |                 |   |                  | 317   |                               |             |             |        | 317   |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 86   | Hay (Dual Supply)  | 188        | 141        | 0      | 0             | 0                               | 0                         | 329   | 45  | 0        | 0   | 45                                | 374  |                                   |                      | 1,045                                       | 50  | 1,095   | 1,095  | 1469   |                  |                 |   |                  | 1,374   |                               |             |             |        | 1,374 |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 87   | Bourke (Dual Supply)                                       | 325        | 7          | 0      | 0             | 0                               | 0                         | 332   | 35  | 6        | 0   | 41                                | 373  |                                   |                      | 1,097                                       | 285   | 1,382   | 1,382  | 1755   |                  |                 |   |                  | 1,595   |                               |             |             |        | 1,595 |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 88   | Wakool (Dual Supply)                                       | 160        | 118        | 0      | 44            | 0                               | 8                         | 330   | 26  | 11       | 0   | 37                                | 367  |                                   |                      | 405   |   | 405   | 405  | 772  |                  |                 |   |                  | 685   |                               | 106         |             | 791    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 89   | Bogan  | 353        | 175        | 0      | 0             | 2                               | 26                        | 556   | 77  | 15       | 45  | 137                               | 693  |                                   |                      | 30  |   | 30  | 30   | 723  |                  | 25              | 25  |                  | 2,680   |                               |             |             |        | 2,680 |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 90   | Guyra  | 202        | 21         | 169    | 0             | 0                               | 7                         | 399   | 36  | 4        | 7   | 47                                | 446  |                                   |                      |   |   |   |  | 446  |                  |                 |   |                  | 435   |                               | 51          |             | 486    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 91   | Cabonne  | 148        | 19         | 5      | 0             | 0                               | 0                         | 172   | 32  | 2        | 2   | 36                                | 208  |                                   |                      | 37  | 10  | 47  | 47   | 255  |                  | 108             | 108                                       |                  | 257   | 16                            |             |             | 273    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 92   | Carrathool (Groundwater)                                   | 369        | 46         | 0      | 0             | 0                               | 2                         | 417   | 48  | 11       | 0   | 59                                | 476  |                                   |                      | 93  | 480   | 573   | 573  | 1049   | 276              |                 |   |                  | 1,097   |                               | 820         |             | 1,917  |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 93   | Tumbarumba   | 143        | 40         | 7      | 0             | 25                              | 2                         | 217   | 35  | 3        | 20  | 58                                | 275  |                                   |                      |   |   |   |  | 275  |                  |                 |   |                  | 445   |                               |             |             | 445    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 94   | Gundagai   | 336        | 190        | 0      |               |                                 |                           | 536   | 40  | 24       |   | 64                                | 600  |                                   |                      |   |   |   |  | 600  |                  | 234             | 234                                       |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 96   | Warren (Dual Supply)                                       | 279        | 35         | 0      | 0             | 0                               | 0                         | 314   | 35  | 25       | 5   | 65                                | 379  |                                   |                      | 361   | 96  | 457   | 457  | 836  |                  |                 |   |                  | 457   | 345                           |             |             | 802    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 97   | Bombala  | 140        | 7          | 0      | 0             | 7                               | 1                         | 155   | 10  | 7        | 0   | 17                                | 172  | 20                                | 20                   | 83  |   | 83  | 103  | 275  |                  |                 | 20  |                  | 400   |                               |             |             | 400    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 98   | Walcha   | 94         | 36         | 0      | 3             | 10                              | 7                         | 150   | 19  | 0        | 1   | 20                                | 170  |                                   |                      |   | 3   | 3   | 3  | 173  | 2                |                 |   |                  | 148   |                               |             |             | 148    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 100  | Balranald (Dual Supply)                                    | 127        | 44         | 0      | 0             | 0                               | 0                         | 171   | 11  | 8        | 0   | 19                                | 190  |                                   |                      | 375   | 209   | 584   | 584  | 774  |                  |                 |   |                  | 1,092   |                               |             |             | 1,092  |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 101  | Murrumbidgee (Groundwater)                                 | 445        | 251        | 0      |               |                                 |                           | 710   | 53  | 31       |   | 84                                | 794  |                                   |                      |   |   |   |  | 794  |                  | 27              | 27  |                  | 826   |                               |             |             | 826    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 103  | Central Darling (Dual Supply)                              | 68         | 38         | 0      |               |                                 |                           | 108   | 8   | 5        |   | 13                                | 121  |                                   |                      | 240   |   | 240   | 240  | 361  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 104  | Boorowa  | 109        | 21         | 0      | 0             | 10                              | 56                        | 196   | 9   | 9        | 0   | 18                                | 214  |                                   |                      |   |   |   |  | 214  |                  |                 |   |                  | 167   | 11                            |             |             | 178    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 105  | Brewarrina (Dual Supply)                                   | 253        | 30         | 0      | 0             | 0                               | 0                         | 283   | 22  | 9        | 0   | 31                                | 314  |                                   |                      | 320   | 621   | 941   | 941  | 1255   |                  |                 |   |                  | 941   | 90                            |             |             | 1,031  |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 106  | Jerilderie (Dual Supply)                                   | 80         | 25         | 0      | 0             | 1                               | 0                         | 106   | 7   | 5        | 0   | 12                                | 118  | 50                                | 50                   | 374   | 3   | 377   | 427  | 545  |                  |                 | 50  |                  | 482   |                               |             |             | 482    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| Totals (excluding bulk suppliers)<br>for 200 - 1,500 Properties                    |  |            |            |        |               |                                 |                           |   |   |          |   |                                   | 9,030  | 0                                 | 90                   | 90  | 4,435                                       | 1,802   | 6,236  | 6,326  | 15,350           | 393             | 633                                       | 723              | 12,490  | 3,578                         | 20          | 977         | 17,065 |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| LWUs without Water Supply  |  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 9  | Wagga Wagga (NO WS)  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 249                               | 249                  |   |   |   | 249  | 249  |                  |                 | 5,371                                     | 5,620            |   | 249                           |             |             | 249    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 30A  | Hawkesbury   |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 18                                | 18                   |   |   |   | 18   | 18   |                  |                 | 153                                       | 171              |   | 18                            |             |             | 18     |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 69   | Temora   |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 99                                | 99                   |   |   |   | 99   | 99   |                  |                 |   | 99               |   | 99                            |             |             | 99     |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 72   | Bland  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 262                               | 262                  |   |   |   | 262  | 262  |                  |                 |   | 262              |   | 262                           |             |             | 262    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 77   | Junee  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 147                               | 147                  |   |   |   | 147  | 147  |                  |                 |   | 147              |   | 147                           |             |             | 147    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 78   | Blayney  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 211                               | 211                  |   |   |   | 211  | 211  |                  |                 |   | 211              |   | 211                           |             |             | 211    |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 95   | Weddin   |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 12                                | 12                   |   |   |   | 12   | 12   |                  |                 |   | 12               |   | 12                            |             |             | 12     |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 99   | Coolamon   |            |            |        |               |                                 |                           |   |   |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  | 75              | 75  |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 102  | Lockhart   |            |            |        |               |                                 |                           |   |   |          |   |                                   |  | 2                                 | 2                    |   |   |   | 2  |  |                  |                 | 2   |                  |   | 2                             |             |             | 2      |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| 107  | Urana  |            |            |        |               |                                 |                           |   |   |          |   |                                   |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| Total for the 93 LWUs reporting cols (1) & (2)<br>or cols (1) & (3)                |  | 151,000    | 39,000     | 14,300 | 8,100         | 8,400                           | 6,100                     |   | 21,700  |          |   | 33,000                            | 260,000  | 11,600                            | 11,600               | 7,500                                       | 11,600                                      | 19,100  | 30,800   | 286,000  | 4,000            | 27,900          | 39,000                                    | 183,000          | 43,100  | 10,500                        | 45,500      | 282,000     |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| % of Total Potable Supply (Col(10))  |  | 58%        | 15%        | 6%     | 3%            | 3%                              | 2%                        |   | 8%  |          |   | 13%                               |  | 11,600                            | 11,600               | 7,600                                       | 12,700                                      | 20,000  | 31,800   | 291,000  | 26,100           | 27,900          | 39,000                                    | 208,000          | 47,500  | 10,500                        | 46,000      | 312,000     |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |
| TOTAL for all LWUs (excluding double counting for bulk water exports) <sup>3</sup> |  |            |            |        |               |                                 |                           |   |   |          |   | 260,000                           |  |                                   |                      |   |   |   |  |  |                  |                 |   |                  |   |                               |             |             |        |       |            |            |             |            |             |  |       |                                   |     |                        |                       |      |                 |                                    |                                 |   |            |      |       |       |            |            |             |            |             |



Table 8: 2014-15 NSW urban water supplied

Notes:

- Source:** Data provided by the 105 regional NSW water utilities for the *2014-15 NSW Water Supply and Sewerage Benchmarking Report*. 96 of these utilities are responsible for water supply. Columns (11) and (11a) report the volume of recycled water use and include a further 9 utilities which are responsible for sewerage only.
- The volumes of water supplied by Sydney and Hunter Water Corporations and Water NSW (from January 2015, formerly Sydney Catchment Authority) were obtained from the *National Performance Report 2014-15* and have not been included in the totals shown above.
- The total water supplied for all regional water utilities shown in the bottom line of the above table excludes double counting where water is supplied by a bulk supplier. Similarly, the total water sourced shown in the bottom line of the table excludes double counting between bulk suppliers and reticulators.
- Incomplete Data:** Where a water utility has not reported its residential use (col (1)), the residential use has been calculated based on the average percentage of 58% of the Total Potable Urban Water Supplied shown in Note 8. Where a water utility has not reported its total potable Urban Water Supplied (col (10)), the previous years' reported value has been used. These values are shown in *italics bold* (see also Note 6).
- Where a LWU has only reported data for 'residential' use but not for 'commercial' or for 'industrial' use, the reported 'residential' value has been reduced and a 'commercial/industrial' component has been included. In this case, the 'residential' component has been calculated based on the average percentage of 58% of the Total Urban Water Supplied shown in Note 8 below, and is shown in italics bold.
- Non-Revenue Water:** Non-Revenue Water includes Unbilled Water (Unbilled Authorised Supply - fire fighting and mains flushing - refer also to Notes 9 and 10 on pages 33 and 34), Real Losses (mostly Leakage) and Apparent Losses (under registration of customer meters and illegal use).  
Leakage studies for over 40 NSW LWUs together with Statewide analysis of Non-Revenue Water for NSW water utilities, indicate Leakage is a minimum of 6% of potable Urban Water Supplied (range 6% to 35%) while Non-Revenue Water is a minimum of 10% (comprising Leakage [minimum 6%] and Apparent Loss plus Unbilled Water [minimum 4%]). Recent analysis of reported data for utilities with over 10,000 connected properties tends to corroborate these minimum values. Therefore, for those utilities reporting Non-Revenue Water of less than 10% (col (9)), the Non-Revenue Water has been increased to 10% of the Urban Water Supplied (col (10)) (shown in *italics bold*), unless the LWU has provided evidence of a lower value of Leakage under Note 7 below.  
In such a case, the adopted value for Non-Revenue Water is the reported Leakage plus 4%.
- Real Losses (mostly Leakage):** Leakage is a component of Non-Revenue Water. As described in Note 6 above, a minimum of 6% of the Total Urban Water Supplied (potable) has been adopted for Leakage, unless evidence of a lower value has been provided by the LWU. Therefore, unless corroborated by evidence, (eg. a reservoir drop test, detailed waste metering or night flow analysis (see Table 10 on page 172)), reported Leakage of less than 6% (column (8)) has been increased to 6% (shown in *italics bold*).
- Potable Water Supplied:** The above analysis shows that the total 2014-15 urban water supplied for regional NSW was 291,000 ML (column (13)), of which 260,000 ML (i.e. 89%) (column (10)) was potable water. The average uses as a percentage of the total **potable** water supplied were:
  - ♦ Residential - 58% (column (1))
  - ♦ Commercial - 15% (column (2))
  - ♦ Industrial - 6% (column (3))
  - ♦ Non-Revenue Water (NRW) - 13% (column (9))In addition, the rural, institutional and public parks and gardens uses were 3%, 3% and 2% of the total potable water supplied respectively (columns (4), (5) and (6)). The components of industrial and rural water supplied are shown in Table 8D on page 166.
- Non-Potable Water Supplied:** The total non-potable urban water supplied was 20,000 ML (column (12c)) which included 11,600 ML recycled urban water supply (column (11)+(11a)). These volumes are 7% and 4% respectively of the 291,000 ML **total urban water** supplied (column (13)). The non-potable urban supply was mainly for outdoor uses in dual water supplies, but also includes supplies to industry and other outdoor uses.
- The **total urban water supplied** (column (13)) comprises the sum of the potable water supplied (column (10)) and non-potable water supplied (column (12c)) which includes recycled urban water (columns (11) & (11a)).
- Recycled water** used for non-potable urban water supply is shown in columns (11) & (11a). Recycled water used for non-potable non-urban water supply (agriculture, environmental and on-site use) is shown in column (11b). The total volume of recycled water for NSW regional water utilities is shown in column (11c). For the utilities that did not report this year but reported >10% recycled water in the previous year, the percentage recycled is assumed to be the same as that of the previous year (refer also to section H4.7 on page 357). This results in a volume of recycled water of 39,000 ML (see also Table 15 on page 192) which is 22% of the total volume of sewage collected. Refer also to Figure 55 on page 92, figures 27 and 26a of Table 4 on page 111 and graph 13 on page 208.
- All LWUs reported nil for Volume Sourced from Desalination (W3), Bulk Recycled Water Purchased (W6), Water Supplied for Environmental Flows (W13) and Bulk Recycled Water Exports (W15).



Table 8A: 2014-15 Total urban potable water supplied/produced

| WATER UTILITY  |  | NON-REVENUE POTABLE WATER SUPPLIED <sup>2</sup> - (ML) |         |                                |     |     |                       |                                |      |      |                      |   |         | REVENUE WATER <sup>1</sup><br>Potable (ML)<br>Excl Bulk | TOTAL URBAN WATER SUPPLIED Potable (ML) |                           | TOTAL URBAN WATER PRODUCED Potable (ML) | BULK WATER EXPORTS |             |              | RECYCLED WATER (ML) |                |                       |                   |        |                 |
|--|--|--|---------|--------------------------------|-----|-----|-----------------------|--------------------------------|------|------|----------------------|---|---------|---|---|---------------------------|---|--------------------|-------------|--------------|---------------------|----------------|-----------------------|-------------------|--------|-----------------|
|  |  | REAL LOSS <sup>4</sup><br>(Leakage)                    |         | APPARENT LOSS + UNBILLED WATER |     |     |                       |                                |      |      |                      | TOTAL NON-REVENUE WATER<br>(Real Loss + Apparent Loss + Unbilled) |         |   | Revenue + Non-revenue water             |                           | Adopted                                 | W14                |             |              | NON URBAN           |                |                       |                   | TOTAL  |                 |
|  |  |  |         | Apparent Loss                  |     |     | Unbilled <sup>2</sup> | Apparent Loss + Unbilled Water |      |      | Potable <sup>1</sup> |   |         |   |   |                           |   | Non Potable        | Recycled    | Agricultural | Environmental       | On-site        | Mngd Aquifer Recharge | URBAN + NON URBAN |        |                 |
|  |  | Reported   | Adopted | Reported                       |     |     | Reported              | Reported                       |      |      | Adopted              | Reported  | Adopted | Col(14) + Col(17)                                       | Col(15) + Col(17)                       | Col(19) + Col(20a) - W5.1 | (20a) W14.1                             | (20b) W14.2        | (20c) W15   | (21) W22     | (22) W23            | (23) W24       | (24) W25.1            | (24) W26          |        |                 |
|  |  | (1)  | (2)     | (3)                            | (4) | (5) | (6)                   | (9)                            | (10) | (11) | (12)                 | (13)  | (14)    | (15) W10.1  | (16)                                    | (17) W8.1+W9.1            | (18)                                    | (19) W11.1         | (19a) W11.3 |              |                     |                |                       |                   |        |                 |
|  | Sydney Water Corporation<br>Hunter Water Corporation |  |         |                                |     |     |                       |                                |      |      |                      | 11,000  |         |   | 464,000<br>56,000                       | 464,000<br>67,000         |   | 515,834<br>67,014  | 380         | 0            | 0                   | 4,795<br>1,562 | 11,779<br>0           | 14,680<br>180     | 0<br>0 | 43,075<br>4,600 |
| LWUs with > 10,000 Properties                              |  |  |         |                                |     |     |                       |                                |      |      |                      |   |         |   |   |                           |   |                    |             |              |                     |                |                       |                   |        |                 |
| 1  | Gosford City Council                                 | 1,418  | 1,418   | 9%                             | 15  | 275 | 290                   | 76                             | 366  | 2%   | 366                  | 2%  | 1,784   | 1,784   | 12%                                     | 13,462                    | 15,246                                  | 15,246             | 13,103      | 286          |                     |                |                       |                   | 19     |                 |
| 2  | Wyong Water  | 620  | 696     | 5%                             | 620 | 182 | 802                   |                                | 802  | 6%   | 802                  | 6%  | 1,422   | 1,498   | 11%                                     | 12,424                    | 13,846                                  | 13,922             | 16,021      | 2,650        | 238                 |                |                       |                   | 759    |                 |
| 3  | Shoalhaven City Council                              | 1,596  | 1,596   | 13%                            | 12  | 203 | 215                   | 67                             | 282  | 2%   | 282                  | 2%  | 1,878   | 1,878   | 16%                                     | 10,187                    | 12,065                                  | 12,065             | 12,065      |              | 1,527               |                |                       |                   |        | 1,705           |
| 4  | Rous County Council                                  | 230  | 230     |                                | 11  | 214 | 225                   | 53                             | 278  |      | 278                  |   | 508     | 508   |   | 806                       | 1,314                                   | 1,314              | 11,183      | 9,869        |                     |                |                       |                   |        |                 |
| 5  | MidCoast County Council                              | 812  | 812     | 9%                             | 184 | 175 | 359                   | 175                            | 534  | 6%   | 534                  | 6%  | 1,346   | 1,346   | 15%                                     | 7,398                     | 8,744                                   | 8,744              | 8,744       |              | 436                 | 93             |                       |                   | 941    |                 |
| 6  | Tweed Shire Council                                  | 520  | 520     | 6%                             | 350 | 111 | 461                   | 43                             | 504  | 6%   | 504                  | 6%  | 1,024   | 1,024   | 12%                                     | 7,642                     | 8,666                                   | 8,666              | 8,661       |              | 49                  | 2              |                       |                   | 551    |                 |
| 7  | Port Macquarie-Hastings (Unfiltered)                 | 456  | 456     | 7%                             | 6   | 105 | 111                   | 28                             | 139  | 2%   | 155                  | 3%  | 595     | 611   | 10%                                     | 5,507                     | 6,102                                   | 6,118              | 6,118       |              | 80                  | 7              |                       |                   | 386    |                 |
| 8  | Riverina Water County Council                        | 408  | 937     | 6%                             | 15  | 281 | 296                   | 74                             | 370  | 2%   | 625                  | 4%  | 778     | 1,562   | 10%                                     | 14,061                    | 14,839                                  | 15,623             | 15,591      |              |                     |                |                       |                   |        |                 |
| 10   | Coffs Harbour City Council                           | 444  | 444     | 8%                             |     |     |                       | 42                             | 42   | 1%   | 128                  | 2%  | 486     | 572   | 10%                                     | 5,212                     | 5,698                                   | 5,784              | 5,784       |              | 497                 | 207            |                       |                   | 1,013  |                 |
| 11   | Albury City Council                                  | 374  | 445     | 6%                             | 6   | 97  | 103                   | 35                             | 138  | 2%   | 296                  | 4%  | 512     | 741   | 10%                                     | 6,668                     | 7,180                                   | 7,409              | 7,788       | 379          | 880                 | 1,518          |                       |                   | 2,398  |                 |
| 12   | Fish River Water Supply                              | 1,555  | 1,555   |                                |     |     |                       |                                |      |      |                      |   | 1,555   | 1,555   |   | 120                       | 1,675                                   | 1,675              | 2,426       | 751          | 2,042               |                |                       |                   |        |                 |
| 13   | Tamworth Regional Council                            | 383  | 548     | 7%                             | 6   | 100 | 106                   |                                | 106  | 1%   | 235                  | 3%  | 489     | 783   | 10%                                     | 7,044                     | 7,533                                   | 7,827              | 7,827       |              | 4,278               |                |                       |                   |        | 4,278           |
| 14   | Clarence Valley Council                              | 850  | 850     | 14%                            | 13  | 240 | 253                   | 450                            | 703  | 12%  | 703                  | 12%   | 1,553   | 1,553   | 26%                                     | 4,489                     | 6,042                                   | 6,042              | 6,042       |              |                     |                |                       |                   | 195    |                 |
| 15   | Eurobodalla Shire Council                            | 329  | 329     | 10%                            | 3   | 201 | 204                   | 17                             | 221  | 7%   | 221                  | 7%  | 550     | 550   | 17%                                     | 2,743                     | 3,293                                   | 3,293              | 3,293       |              | 20                  |                |                       |                   | 243    |                 |
| 16   | Wingecarribee Shire Council                          | 400  | 400     | 9%                             | 5   | 62  | 67                    | 28                             | 95   | 2%   | 95                   | 2%  | 495     | 495   | 11%                                     | 4,040                     | 4,535                                   | 4,535              | 4,535       |              | 160                 | 4              |                       |                   | 163    |                 |
| 17   | Queanbeyan City Council                              | 375  | 375     | 10%                            | 3   | 70  | 73                    | 45                             | 118  | 3%   | 118                  | 3%  | 493     | 493   | 13%                                     | 3,444                     | 3,937                                   | 3,937              | 0           |              |                     |                |                       |                   |        |                 |
| 18   | Dubbo City Council                                   | 290  | 670     | 8%                             | 9   | 50  | 59                    | 44                             | 103  | 1%   | 168                  | 2%  | 393     | 838   | 10%                                     | 7,541                     | 7,934                                   | 8,379              | 8,379       |              | 2,108               | 75             |                       |                   | 2,183  |                 |
| 19   | Orange City Council                                  | 174  | 403     | 9%                             | 4   | 77  | 81                    | 165                            | 246  | 5%   | 246                  | 5%  | 420     | 649   | 14%                                     | 3,832                     | 4,252                                   | 4,481              | 4,481       |              |                     |                |                       |                   | 2,826  |                 |
| 20   | Goulburn Mulwaree Council                            | 258  | 258     | 10%                            | 3   | 45  | 48                    | 13                             | 61   | 2%   | 61                   | 2%  | 319     | 319   | 13%                                     | 2,225                     | 2,544                                   | 2,544              | 2,546       | 2            | 1,612               |                |                       |                   |        | 1,806           |
| 21   | Bathurst Regional Council                            | 416  | 416     | 7%                             | 7   |     | 7                     |                                | 7    | 0%   | 167                  | 3%  | 423     | 583   | 10%                                     | 5,362                     | 5,785                                   | 5,945              | 5,951       | 6            |                     | 3,059          | 653                   |                   | 3,712  |                 |
| 22   | Lismore City Council                                 | 194  | 194     | 6%                             | 3   | 64  | 67                    |                                | 67   | 2%   | 121                  | 4%  | 261     | 315   | 10%                                     | 2,863                     | 3,124                                   | 3,178              | 0           |              | 5                   |                |                       |                   | 5      |                 |
| 23   | Bega Valley Shire Council                            | 213  | 213     | 7%                             | 26  | 191 | 217                   | 49                             | 266  | 9%   | 266                  | 9%  | 479     | 479   | 16%                                     | 2,558                     | 3,037                                   | 3,037              | 3,037       |              | 79                  |                |                       |                   |        | 446             |
| 24   | Ballina Shire Council                                | 729  | 729     | 20%                            | 4   | 58  | 62                    | 19                             | 81   | 2%   | 81                   | 2%  | 810     | 810   | 22%                                     | 2,892                     | 3,702                                   | 3,702              | 98          |              |                     |                |                       |                   | 517    |                 |
| 25   | Kempsey Shire Council                                | 212  | 409     | 11%                            | 65  | 141 | 206                   | 141                            | 347  | 9%   | 347                  | 9%  | 559     | 756   | 20%                                     | 2,960                     | 3,519                                   | 3,716              | 3,743       | 27           | 12                  | 5              |                       |                   | 77     |                 |
| 26   | Essential Energy                                     | 310  | 310     | 7%                             | 4   | 85  | 89                    |                                | 89   | 2%   | 155                  | 3%  | 399     | 465   | 10%                                     | 4,230                     | 4,629                                   | 4,695              | 4,695       |              |                     |                |                       |                   | 776    |                 |
| 27   | Byron Shire Council                                  | 193  | 193     | 7%                             | 3   | 10  | 13                    |                                | 13   | 0%   | 83                   | 3%  | 206     | 276   | 10%                                     | 2,535                     | 2,741                                   | 2,811              | 440         |              | 156                 |                |                       |                   |        | 444             |
| 28A  | Goldenfields Water Reticulator                       | 73   | 363     | 6%                             | 8   | 28  | 36                    | 66                             | 102  | 2%   | 242                  | 4%  | 175     | 605   | 10%                                     | 5,444                     | 5,619                                   | 6,049              | 290         |              |                     |                |                       |                   |        |                 |
| 28B  | Goldenfields Water County Council                    | 440  | 440     |                                |     |     |                       |                                |      |      |                      |   | 440     | 440   |   | 0                         | 440                                     | 440                | 9,151       | 8,988        |                     |                |                       |                   |        |                 |
| Medians (% of LWUs basis) for LWUs with >10,000 Properties |  | 8%   |         |                                |     |     |                       |                                |      |      |                      |   |         | 3%  |   | 11%                       |   |                    |             |              |                     |                |                       |                   |        |                 |
| LWUs with 3,001 - 10,000 Properties                        |  |  |         |                                |     |     |                       |                                |      |      |                      |   |         |   |   |                           |   |                    |             |              |                     |                |                       |                   |        |                 |
| 29   | Armidale Dumaresq Council                            | 366  | 366     | 13%                            | 3   | 49  | 52                    |                                | 52   | 2%   | 52                   | 2%  | 418     | 418   | 15%                                     | 2,438                     | 2,856                                   | 2,856              | 2,856       |              | 910                 |                |                       |                   |        | 910             |
| 30   | Griffith City Council                                | 390  | 390     | 6%                             |     | 130 | 130                   | 123                            | 253  | 4%   | 253                  | 4%  | 643     | 643   | 10%                                     | 5,852                     | 6,495                                   | 6,495              | 6,495       |              | 158                 |                |                       |                   | 158    |                 |
| 31   | Lithgow City Council                                 |  | 91      | 6%                             |     |     |                       |                                |      |      | 61                   | 4%  |         | 152   | 10%                                     | 1,369                     | 1,369                                   | 1,521              | 828         |              |                     |                |                       |                   |        |                 |
| 32   | Mid-Western Regional Council                         | 172  | 172     | 7%                             | 2   | 158 | 160                   | 12                             | 172  | 7%   | 172                  | 7%  | 344     | 344   | 14%                                     | 2,136                     | 2,480                                   | 2,480              | 2,480       |              | 2                   |                |                       |                   | 2      |                 |
| 33   | Richmond Valley Council                              | 192  | 192     | 7%                             | 3   | 52  | 55                    | 14                             | 69   | 2%   | 85                   | 3%  | 261     | 277   | 10%                                     | 2,558                     | 2,819                                   | 2,835              | 2,256       |              | 407                 |                |                       |                   |        | 420             |
| 34   | Nambucca Shire Council                               | 155  | 155     | 11%                            | 2   | 16  | 18                    | 8                              | 26   | 2%   | 26                   | 2%  | 181     | 181   | 12%                                     | 1,272                     | 1,453                                   | 1,453              | 1,453       |              | 79                  |                |                       |                   |        | 79              |
| 35   | Singleton Council                                    | 177  | 177     | 7%                             | 3   | 37  | 40                    | 13                             | 53   | 2%   | 84                   | 3%  | 230     | 261   | 10%                                     | 2,363                     | 2,593                                   | 2,624              | 2,624       |              |                     |                |                       |                   |        |                 |
| 36   | Parkes Shire Council                                 | 380  | 380     | 15%                            | 2   | 120 | 122                   | 41                             | 163  | 6%   | 163                  | 6%  | 543     | 543   | 21%                                     | 2,028                     | 2,571                                   | 2,571              | 2,248       | 13           |                     |                |                       |                   | 172    |                 |
| 37   | Inverell Shire Council                               | 100  | 109     | 6%                             |     | 100 | 100                   |                                | 100  | 6%   | 100                  | 6%  | 200     | 209   | 12%                                     | 1,600                     | 1,800                                   | 1,809              | 1,809       |              |                     |                |                       |                   |        |                 |
| 38   | Moree Plains Shire Council                           | 288  | 288     | 10%                            | 50  | 70  | 120                   | 25                             | 145  | 5%   | 145                  | 5%  | 433     | 433   | 15%                                     | 2,529                     | 2,962                                   | 2,962              | 2,987       | 25           | 471                 |                |                       |                   |        | 793             |
| 39   | Cowra Shire Council                                  | 220  | 220     | 8%                             |     |     |                       | 774                            | 774  | 27%  | 774                  | 27%   | 994     | 994   | 34%                                     | 1,904                     | 2,898                                   | 2,898              | 2,762       | 5            |                     |                |                       |                   |        |                 |
| 40   | Central Tablelands Water                             | 121  | 121     | 7%                             | 2   |     | 2                     | 70                             | 72   | 4%   | 72                   | 4%  | 193     | 193   | 11%                                     | 1,519                     | 1,712                                   | 1,712              | 1,853       | 141          |                     |                |                       |                   |        |                 |
| 41   | Muswellbrook Shire Council                           | 114  | 126     | 6%                             | 2   | 38  | 40                    | 10                             | 50   | 2%   | 84                   | 4%  | 164     | 210   | 10%                                     | 1,887                     | 2,051                                   | 2,097              | 2,097       |              |                     |                |                       |                   | 892    |                 |
| 42   | Corowa Shire Council                                 | 223  | 223     | 7%                             | 3   | 58  | 61                    | 14                             | 75   | 2%   | 88                   | 3%  | 298     | 311   | 10%                                     | 2,805                     | 3,103                                   | 3,116              | 3,116       |              | 160                 | 24             |                       |                   | 184    |                 |
| 43   | Tumut Council  | 75   | 114     | 8%                             | 1   | 1   | 2                     | 6                              | 8    | 1%   | 29                   | 2%  | 83      | 143   | 10%                                     | 1,287                     | 1,370                                   | 1,430              | 1,430       |              | 7                   |                |                       |                   | 101    |                 |



Table 8A: 2014-15 Total urban potable water supplied/produced

| WATER UTILITY  |                                 | NON-REVENUE POTABLE WATER SUPPLIED <sup>2</sup> - (ML) |         |     |                                |                             |             |                           |                                |                               |                 |                              |   | REVENUE WATER <sup>1</sup><br>Potable (ML)<br>Excl Bulk | TOTAL URBAN WATER SUPPLIED Potable (ML) |            | TOTAL URBAN WATER PRODUCED Potable (ML) | BULK WATER EXPORTS   |                   |                    | RECYCLED WATER (ML)       |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
|--|---------------------------------|--|---------|-----|--------------------------------|-----------------------------|-------------|---------------------------|--------------------------------|-------------------------------|-----------------|------------------------------|---|---|---|------------|---|----------------------|-------------------|--------------------|---------------------------|---------------|---------|-----------------------|---------|-------------------|-------------|-------------|-----------|----------|----------|----------|------------|----------|--|--|-----|--|--|--|--|--|--|--|--|--|
|  |                                 | REAL LOSS <sup>4</sup><br>(Leakage)                    |         |     | APPARENT LOSS + UNBILLED WATER |                             |             |                           |                                |                               |                 |                              | TOTAL NON-REVENUE WATER<br>(Real Loss + Apparent Loss + Unbilled) |   | Revenue + Non-revenue water             |            |   | W14                  |                   |                    | NON URBAN                 |               |         |                       | TOTAL   |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
|  |                                 |  |         |     | Apparent Loss                  |                             |             | Unbilled <sup>2</sup>     | Apparent Loss + Unbilled Water |                               |                 |                              |   |   |   |            |   | Potable <sup>1</sup> | Non Potable       | Recycled           | Agricultural              | Environmental | On-site | Mngd Aquifer Recharge |         | URBAN + NON URBAN |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
|  |                                 | Reported   | Adopted |     | Reported                       |                             |             |                           | Reported                       | Reported                      |                 | Adopted                      |   | Reported  | Adopted                                 |            | Reported                                |                      |                   |                    |                           |               |         |                       | Adopted |                   | (20a) W14.1 | (20b) W14.2 | (20c) W15 | (21) W22 | (22) W23 | (23) W24 | (24) W25.1 | (24) W26 |  |  |     |  |  |  |  |  |  |  |  |  |
|  |                                 |  |         |     | See note 5                     | % of Total Potable (2)/(19) | Illegal Use | Under-registr'n of meters | Total (4)+(5)                  | Fire Fighting, Mains Flushing | Col(6) + Col(9) | % of Total Potable (10)/(19) | See note 5  | % of Total Potable (12)/(19)                            | (1) + (10)                              | (2) + (12) | % of Total Potable (15)/(19)            | (17) W8.1+W9.1       | Col(14) + Col(17) | Col (15) + Col(17) | Col(19) + Col(20a) - W5.1 |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 44   | Gunnedah Shire Council          | 45   | 124     | 4%  | 19                             | 20                          | 39          |                           | 39                             | 1%                            | 124             | 4%                           | 84  | 248   | 8%                                      | 2,856      | 2,940                                   | 3,104                |                   |                    |                           |               |         |                       |         |                   |             | 603         |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 45   | Upper Hunter Shire Council      | 373  | 373     | 14% | 3                              | 51                          | 54          |                           | 54                             | 2%                            | 54              | 2%                           | 427   | 427   | 17%                                     | 2,148      | 2,575                                   | 2,575                |                   |                    |                           |               |         |                       |         |                   |             | 126         |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 46   | Narrabri Shire Council          | 292  | 292     | 11% | 283                            | 9                           | 292         | 18                        | 310                            | 12%                           | 310             | 12%                          | 602   | 602   | 23%                                     | 2,006      | 2,608                                   | 2,608                |                   |                    |                           |               |         |                       |         |                   |             | 432         |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 47   | Bellingen Shire Council         | 93   | 110     | 10% | 12                             | 15                          | 27          | 12                        | 39                             | 4%                            | 39              | 4%                           | 132   | 149   | 13%                                     | 955        | 1,087                                   | 1,104                |                   |                    | 2                         |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 48   | Leeton Shire Council            | 150  | 243     | 9%  | 10                             | 50                          | 60          |                           | 60                             | 2%                            | 60              | 2%                           | 210   | 303   | 11%                                     | 2,397      | 2,607                                   | 2,700                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 49   | Young Shire Council             | 92   | 92      | 7%  | 1                              | 20                          | 21          | 6                         | 27                             | 2%                            | 32              | 3%                           | 119   | 124   | 10%                                     | 1,121      | 1,240                                   | 1,245                |                   |                    |                           |               |         |                       |         |                   |             | 180         |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 50   | Cooma-Monaro Council            |  | 92      | 6%  |                                |                             |             |                           | 61                             | 4%                            |                 |                              |   | 153   | 10%                                     | 1,380      | 1,380                                   | 1,533                |                   |                    |                           |               |         |                       |         |                   |             | 5           |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 51   | Forbes Shire Council            | 58   | 123     | 6%  | 14                             | 44                          | 58          | 44                        | 102                            | 5%                            | 102             | 5%                           | 160   | 225   | 11%                                     | 1,832      | 1,992                                   | 2,057                |                   |                    | 358                       |               |         |                       |         |                   |             | 9           |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 52   | Snowy River Shire Council       | 45   | 73      | 12% |                                |                             |             |                           | 0                              | 0%                            |                 |                              | 45  | 73  | 12%                                     | 533        | 578                                     | 606                  |                   |                    | 5                         |               |         |                       |         |                   |             | 39          |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 53   | Berrigan Shire Council          | 115  | 115     | 9%  | 8                              | 6                           | 14          |                           | 14                             | 1%                            | 14              | 1%                           | 129   | 129   | 10%                                     | 1,122      | 1,251                                   | 1,251                |                   |                    |                           |               |         |                       |         |                   |             | 590         |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                                 |  |         |     |                                |                             |             |                           |                                |                               |                 |                              |   |   |   |            | 7%                                      |                      |                   |                    |                           |               |         |                       |         |                   | 4%          |             |           |          |          |          |            |          |  |  | 11% |  |  |  |  |  |  |  |  |  |
| LWUs with 1,501 - 3,000 Properties                       |                                 |  |         |     |                                |                             |             |                           |                                |                               |                 |                              |   |   |   |            |   |                      |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 54   | Deniliquin Council              | 150  | 150     | 8%  |                                | 20                          | 20          |                           | 20                             | 1%                            | 37              | 2%                           | 170   | 187   | 10%                                     | 1,695      | 1,865                                   | 1,882                |                   |                    |                           |               |         |                       |         |                   |             |             | 54        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 55   | Warrumbungle Shire Council      | 239  | 239     | 24% | 5                              | 8                           | 13          |                           | 13                             | 1%                            | 13              | 1%                           | 252   | 252   | 25%                                     | 748        | 1,000                                   | 1,000                |                   |                    |                           |               |         |                       |         |                   |             |             | 59        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 56   | Yass Valley Council             | 106  | 106     | 13% | 1                              | 2                           | 3           | 100                       | 103                            | 12%                           | 103             | 12%                          | 209   | 209   | 25%                                     | 635        | 844                                     | 844                  |                   |                    | 4                         |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 57   | Wellington Council              | 90   | 90      | 7%  | 6                              | 150                         | 156         | 3                         | 159                            | 12%                           | 159             | 12%                          | 249   | 249   | 19%                                     | 1,046      | 1,295                                   | 1,295                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 58   | Cootamundra Shire Council       | 75   | 75      | 10% | 1                              | 10                          | 11          | 30                        | 41                             | 5%                            | 41              | 5%                           | 116   | 116   | 15%                                     | 652        | 768                                     | 768                  |                   |                    |                           |               |         |                       |         |                   |             |             | 486       |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 59   | Lachlan Shire Council           |  | 134     | 7%  |                                |                             |             |                           | 79                             | 4%                            |                 |                              |   | 213   | 11%                                     | 1,793      | 0                                       | 2,006                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 60   | Glen Innes Severn Shire Council | 38   | 38      | 7%  | 1                              | 1                           | 2           | 1                         | 3                              | 1%                            | 12              | 2%                           | 41  | 50  | 10%                                     | 460        | 501                                     | 510                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 61   | Liverpool Plains Shire Council  | 77   | 95      | 11% | 9                              | 16                          | 25          | 5                         | 30                             | 3%                            | 30              | 3%                           | 107   | 125   | 15%                                     | 736        | 843                                     | 861                  |                   |                    | 50                        |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 62   | Narromine Shire Council         | 133  | 133     | 11% | 2                              | 16                          | 18          | 8                         | 26                             | 2%                            | 26              | 2%                           | 159   | 159   | 13%                                     | 1,060      | 1,219                                   | 1,219                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 63   | Narrandera Shire Council        |  | 146     | 7%  |                                |                             |             |                           | 86                             | 4%                            |                 |                              |   | 232   | 11%                                     | 1,946      | 0                                       | 2,177                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 65   | Murray Shire Council            | 77   | 92      | 12% | 1                              | 15                          | 16          |                           | 16                             | 2%                            | 16              | 2%                           | 93  | 108   | 14%                                     | 662        | 755                                     | 770                  |                   |                    |                           |               |         |                       |         |                   |             |             | 90        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 66   | Cobar Water Board               |  |         |     |                                |                             |             |                           |                                |                               |                 |                              |   |   |   |            |   | 0                    |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 67   | Cobar Shire Council             |  | 57      | 6%  |                                |                             |             |                           |                                |                               | 38              | 4%                           |   | 95  | 10%                                     | 853        | 853                                     | 948                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 68   | Tenterfield Shire Council       |  | 21      | 6%  |                                |                             |             |                           | 14                             | 4%                            |                 |                              |   | 35  | 10%                                     | 321        | 321                                     | 356                  |                   |                    | 60                        |               |         |                       |         |                   |             |             | 44        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 70   | Kyogle Council                  | 8  | 25      | 6%  |                                | 4                           | 4           |                           | 4                              | 1%                            | 17              | 4%                           | 12  | 42  | 10%                                     | 372        | 384                                     | 414                  |                   |                    |                           |               |         |                       |         |                   |             |             | 80        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 71   | Palerang Council                | 74   | 74      | 15% | 5                              | 16                          | 21          | 3                         | 24                             | 5%                            | 24              | 5%                           | 98  | 98  | 20%                                     | 393        | 491                                     | 491                  |                   |                    |                           |               |         |                       |         |                   |             |             | 85        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 73   | Upper Lachlan Council           | 15   | 23      | 6%  | 5                              | 25                          | 30          | 15                        | 45                             | 12%                           | 45              | 12%                          | 60  | 68  | 18%                                     | 320        | 380                                     | 388                  |                   |                    |                           |               |         |                       |         |                   |             |             | 50        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 74   | Wentworth Shire Council         |  | 25      | 6%  |                                |                             |             |                           | 17                             | 4%                            |                 |                              |   | 42  | 10%                                     | 372        | 372                                     | 414                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 75   | Coonamble Shire Council         | 9  | 74      | 6%  | 2                              | 1                           | 3           |                           | 3                              | 0%                            | 49              | 4%                           | 12  | 123   | 10%                                     | 1,111      | 1,123                                   | 1,234                |                   |                    | 5                         |               |         |                       |         |                   |             |             | 59        |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| Medians (% of LWUs basis) for 1,500 to 3,000 Properties  |                                 |  |         |     |                                |                             |             |                           |                                |                               |                 |                              |   |   |   |            | 7%                                      |                      |                   |                    |                           |               |         |                       |         |                   | 4%          |             |           |          |          |          |            |          |  |  | 12% |  |  |  |  |  |  |  |  |  |
| LWUs with 200 - 1,500 Properties                         |                                 |  |         |     |                                |                             |             |                           |                                |                               |                 |                              |   |   |   |            |   |                      |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 76   | Harden Shire Council            |  | 41      | 6%  |                                |                             |             | 6                         | 6                              | 1%                            | 28              | 4%                           | 6   | 69  | 10%                                     | 620        | 626                                     | 689                  |                   |                    |                           |               |         |                       |         |                   |             |             |           | 34       |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 79   | Walgett Shire Council           | 140  | 140     | 6%  |                                |                             |             |                           | 81                             | 4%                            |                 |                              | 140   | 221   | 10%                                     | 2,035      | 2,175                                   | 2,256                |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 80   | Greater Hume Shire Council      | 26   | 65      | 11% | 10                             | 6                           | 16          | 20                        | 36                             | 6%                            | 36              | 6%                           | 62  | 101   | 17%                                     | 486        | 548                                     | 587                  |                   |                    |                           |               |         |                       |         |                   |             |             |           | 61       |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 81   | Gwydir Shire Council            | 16   | 48      | 6%  | 1                              | 12                          | 13          | 35                        | 48                             | 6%                            | 48              | 6%                           | 64  | 96  | 12%                                     | 700        | 764                                     | 796                  |                   |                    |                           |               |         |                       |         |                   |             |             |           | 20       |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 83   | Oberon Council                  | 25   | 49      | 7%  | 3                              | 25                          | 28          | 15                        | 43                             | 6%                            | 43              | 6%                           | 68  | 92  | 13%                                     | 612        | 680                                     | 704                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 84   | Gilgandra Shire Council         | 67   | 67      | 7%  | 1                              | 14                          | 15          | 4                         | 19                             | 2%                            | 25              | 3%                           | 86  | 92  | 10%                                     | 833        | 919                                     | 925                  |                   |                    |                           |               |         |                       |         |                   |             |             |           | 238      |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 85   | Uralla Shire Council            | 6  | 9       |     | 1                              | 2                           | 3           | 18                        | 21                             | 7%                            | 21              | 7%                           | 27  | 30  | 9%                                      | 290        | 317                                     | 320                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 86   | Hay Shire Council               | 3  | 45      | 12% |                                |                             |             |                           | 0                              | 0%                            |                 |                              | 3   | 45  | 12%                                     | 329        | 332                                     | 374                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 87   | Bourke Shire Council            | 35   | 35      | 9%  | 1                              | 5                           | 6           |                           | 6                              | 2%                            | 6               | 2%                           | 41  | 41  | 11%                                     | 332        | 373                                     | 373                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 88   | Wakool Shire Council            | 4  | 26      | 7%  |                                |                             |             |                           | 11                             | 3%                            |                 |                              | 4   | 37  | 10%                                     | 330        | 334                                     | 367                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 89   | Bogan Shire Council             | 77   | 77      | 11% | 1                              | 14                          | 15          | 45                        | 60                             | 9%                            | 60              | 9%                           | 137   | 137   | 20%                                     | 556        | 693                                     | 693                  |                   |                    |                           |               |         |                       |         |                   |             |             |           | 25       |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 90   | Guyra Shire Council             | 20   | 36      | 8%  | 1                              | 3                           | 4           | 7                         | 11                             | 2%                            | 11              | 2%                           | 31  | 47  | 11%                                     | 399        | 430                                     | 446                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 91   | Cabonne Council                 | 32   | 32      | 15% |                                | 2                           | 2           | 2                         | 4                              | 2%                            | 4               | 2%                           | 36  | 36  | 17%                                     | 172        | 208                                     | 208                  |                   |                    |                           |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |
| 92   | Carrathool Shire Council        | 1  | 48      | 10% | 1                              | 10                          | 11          |                           | 11                             | 2%                            | 11              | 2%                           | 12  | 59  | 12%                                     | 417        | 429                                     | 476                  |                   |                    | 276                       |               |         |                       |         |                   |             |             |           |          |          |          |            |          |  |  |     |  |  |  |  |  |  |  |  |  |



Table 8A: 2014-15 Total urban potable water supplied/produced

| WATER UTILITY   |                               | NON-REVENUE POTABLE WATER SUPPLIED <sup>2</sup> - (ML) |                     |                                |          |     |                       |                                |          |   |      |                   |          | REVENUE WATER <sup>1</sup><br>Potable (ML)<br>Excl Bulk | TOTAL URBAN WATER SUPPLIED Potable (ML)<br><br>Revenue + Non-revenue water |     | TOTAL URBAN WATER PRODUCED Potable (ML) | BULK WATER EXPORTS |         |  | RECYCLED WATER (ML) |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
|---|-------------------------------|--|---------------------|--------------------------------|----------|-----|-----------------------|--------------------------------|----------|---|------|-------------------|----------|---|--|-----|---|--------------------|---------|--|---------------------|--|-------|--|---|---------------|--------|--|--------|--|-------|--|---|--|--------|--|
|   |                               | REAL LOSS <sup>4</sup><br>(Leakage)                    |                     | APPARENT LOSS + UNBILLED WATER |          |     |                       |                                |          | TOTAL NON-REVENUE WATER<br>(Real Loss + Apparent Loss + Unbilled) |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
|   |                               |  |                     | Apparent Loss                  |          |     | Unbilled <sup>2</sup> | Apparent Loss + Unbilled Water |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
|   |                               | Reported   | Adopted             |                                | Reported |     |                       | Reported                       | Reported |   |      | Adopted           | Reported |   |  |     |   |                    |         |  |                     |  |       |  |   | Adopted       |        |  |        |  |       |  |   |  |        |  |
|   |                               | (1)  | (2)                 | (3)                            | (4)      | (5) | (6)                   | (9)                            | (10)     | (11)  | (12) | (13)              | (14)     |   |  |     |   |                    |         |  |                     |  |       |  |   | (15)<br>W10.1 | (16)   |  |        |  |       |  |   |  |        |  |
| 93  | Tumbarumba Shire Council      |  | 35                  | 35                             | 13%      | 1   | 2                     | 3                              | 20       | 23  | 8%   | 23                | 8%       | 58  | 58   | 21% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 94  | Gundagai Shire Council        |  |                     | 40                             | 7%       |     |                       |                                |          | 24  | 4%   |                   |          | 64  | 11%  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 96  | Warren Shire Council          |  | 35                  | 35                             | 9%       | 5   | 20                    | 25                             | 5        | 30  | 8%   | 30                | 8%       | 65  | 65   | 17% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 97  | Bombala Council               |  | 2                   | 10                             | 6%       |     | 1                     | 1                              |          | 1   | 1%   | 7                 | 4%       | 3   | 17   | 10% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 98  | Walcha Council                |  |                     | 19                             | 11%      |     |                       |                                | 1        | 1   | 1%   | 1                 | 1%       | 1   | 20   | 12% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 100   | Balranald Council             |  |                     | 11                             | 6%       |     |                       |                                |          |   |      | 8                 | 4%       |   | 19   | 10% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 101   | Murrumbidgee Shire Council    |  |                     | 53                             | 7%       |     |                       |                                |          |   |      | 31                | 4%       |   | 84   | 11% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 103   | Central Darling Shire Council |  | 2                   | 8                              | 7%       | 1   | 1                     | 2                              |          | 2   | 2%   | 5                 | 4%       | 4   | 13   | 11% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 104   | Boorowa Council               |  | 8                   | 9                              | 4%       | 0   | 3                     | 3                              |          | 3   | 1%   | 9                 | 4%       | 11  | 18   | 8%  |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 105   | Brewarrina Shire Council      |  | 5                   | 22                             | 7%       |     | 5                     | 5                              |          | 5   | 2%   | 9                 | 3%       | 10  | 31   | 10% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 106   | Jerilderie Shire Council      |  |                     | 7                              | 6%       |     |                       |                                |          |   |      | 5                 | 4%       |   | 12   | 10% |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| Medians (% of LWUs basis) for 200 to 1,500 Properties |                               |  | 7%                  |                                |          |     |                       |                                | 4%       |   |      | 11%               |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| LWUs without Water Supply                             |                               |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 9   | Wagga Wagga (NO WS)           |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 30A   | Hawkesbury                    |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 69  | Temora                        |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 72  | Bland                         |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 77  | Junee                         |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 78  | Blayney                       |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 95  | Weddin                        |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 99  | Coolamon                      |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 102   | Lockhart                      |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| 107   | Urana                         |  |                     |                                |          |     |                       |                                |          |   |      |                   |          |   |  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| Median All LWUs (% of LWUs basis)                     |                               |  | Real Loss (leakage) |                                |          | 7%  |                       |                                |          |   |      | Non-revenue Water |          |   | 11%  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| Median All LWUs (Statewide basis)                     |                               |  |                     |                                |          | 6%  |                       |                                |          |   |      |                   |          |   | 10%  |     |   |                    |         |  |                     |  |       |  |   |               |        |  |        |  |       |  |   |  |        |  |
| Total for all LWUs                                    |                               |  |                     |                                |          |     |                       |                                |          |   |      | 35,000            |          |   | 224,000  |     | 260,000                                 |                    | 255,000 |  | 24,000              |  | 2,000 |  | 0 |               | 15,800 |  | 10,000 |  | 1,600 |  | 0 |  | 39,000 |  |

Notes:

1. Revenue water supplied (potable) = Billed, Authorised water supplied (metered and unmetered).
2. Non-Revenue water supplied (potable) = Real Losses + Apparent Losses + Unbilled Water  
Real Loss is Leakage; Apparent Loss is under registration of customer meters and illegal use; Unbilled Water is authorised unbilled consumption for firefighting and mains flushing.
3. Real Losses (Leakage) in column (2) above are the same as those shown in column (8) of Table 8. They relate only to Total Urban Water Supplied (potable) and exclude bulk water exports.
4. Total Urban Water Supplied (Revenue Water (potable) plus Non-Revenue Water Supplied (potable)) in column (19) above is the same as that shown in column (10) of Table 8.
5. Minimum Losses: The minimum adopted in this report for Real Loss (Leakage) is 6% of the Total Urban Water Supplied (potable) and the minimum adopted for (Apparent Loss plus Unbilled Water) is 4%, unless the utility has provided evidence for the adoption of a lower Leakage (eg. a reservoir drop test, detailed waste metering or night flow analysis (see Table 10)).  
This results in a minimum Non-Revenue Water of 10% of Urban Water Supplied (potable). Therefore, for those utilities reporting Non-Revenue Water of less than 10% (col (14)), the Non-Revenue Water has been increased to 10% of the Urban Water Supplied (col 15) (shown in italics bold), unless the LWU has provided evidence of a lower value of Leakage under Note 6 below.  
In such a case, the adopted value for Non-Revenue Water is the reported Leakage plus 4%.
6. Real Losses (Leakage): As described in Note 5 above, a minimum of 6% of the Total Urban Water Supplied (potable) has been adopted for Leakage.  
Therefore, unless corroborated by evidence (eg. a reservoir drop test, detailed waste metering or night flow analysis (see Table 10)), reported Leakage of less than 6% (column (8)) has been increased to 6% (shown in italics bold).
7. Water Loss Management Programs: As shown in Table 10 on page 172, 74 of the 93 reticulating local water utilities have recently carried out a water loss management program.

Table 8B: 2014-15 water supplied from source catchments in regional NSW

| SOURCE CATCHMENT                | POTABLE URBAN WATER SUPPLIED (ML) |            |            |       |               |                        |                |                   |                              | RECYCLED WATER         |                            | Non-Potable Urban Water Supplied<br><br>(Excluding Bulk Exports & Recycled)<br>(12) | Total Urban Water Supplied<br>Excluding BULK Exports Including Recycled<br>=(10)+(11)+(12)<br>(13) | BULK               | WATER SOURCE (ML) |              |              |            |                |                               |
|---------------------------------|-----------------------------------|------------|------------|-------|---------------|------------------------|----------------|-------------------|------------------------------|------------------------|----------------------------|---|--|--------------------|-------------------|--------------|--------------|------------|----------------|-------------------------------|
|                                 | Residential                       | Commercial | Industrial | Rural | Institutional | Public Parks & Gardens | Unbilled Water | Non-Revenue Water | Potable Urban Water Supplied | For Urban Water Supply | For Non-urban Water Supply |   |  | Bulk Water Exports | Surface Water     | Ground Water | Desalination | Recycling  | Bulk Purchases | Bulk Recycled Water Purchased |
|                                 | (1)                               | (2)        | (3)        | (4)   | (5)           | (7)                    | (8)            | (9)               | = SUM (1) to (9)<br>(10)     | (11)                   | (11b)                      |   |  | (14)               | W1<br>(15)        | W2<br>(16)   | W3<br>(17)   | W4<br>(18) | W5<br>(19)     | W6<br>(20)                    |
| Bega                            | 1,810                             | 445        | 72         | 5     | 182           | 43                     | 49             | 479               | 3,085                        | 367                    | 79                         | 57  | 3,509  |                    | 1,640             | 1,400        |              | 436        |                |                               |
| Bellinger                       | 555                               | 107        | 99         | 125   | 33            | 36                     | 12             | 149               | 1,116                        |                        |                            | 34  | 1,150  | 2                  | 164               | 959          |              |            |                |                               |
| Castlereagh/Macquarie           | 16,860                            | 4,670      | 1,550      | 380   | 1,050         | 1,040                  | 301            | 5,169             | 31,020                       | 2,830                  | 6,278                      | 3,930   | 37,780   | 2,800              | 32,480            | 6,930        |              | 3,480      |                |                               |
| Clarence                        | 6,950                             | 1,940      | 396        | 517   | 85            | 190                    | 492            | 2,167             | 12,737                       | 584                    | 704                        | 56  | 13,377   |                    | 11,900            | 12           |              | 195        | 59             |                               |
| Clyde                           | 2,110                             | 468        | 6          | 13    | 125           | 19                     | 17             | 550               | 3,308                        | 223                    | 20                         |   | 3,531  |                    | 3,130             | 161          |              | 243        |                |                               |
| Darling                         | 3,730                             | 561        | 1,220      | 20    | 284           | 76                     |                | 656               | 6,547                        | 776                    |                            | 3,360   | 10,683   |                    | 10,560            |              |              | 525        | 4,190          |                               |
| Gwydir                          | 3,920                             | 631        | 469        | 49    | 45            | 400                    | 85             | 815               | 6,414                        | 342                    | 471                        | 51  | 6,807  | 25                 | 1,660             | 3,180        |              | 847        | 2,550          |                               |
| Hastings                        | 4,190                             | 947        | 29         | 35    | 252           | 56                     | 28             | 611               | 6,148                        | 299                    | 87                         | 195   | 6,642  |                    | 5,990             |              |              | 189        |                |                               |
| Hawkesbury (Country Towns only) | 16,450                            | 2,360      | 894        | 160   | 995           | 239                    | 117            | 2,750             | 23,965                       | 231                    | 1,929                      | 81  | 24,277   | 288                | 17,470            | 071          |              | 194        | 7,620          |                               |
| Hunter (Country Towns only)     | 4,060                             | 1,060      | 649        | 29    | 422           | 178                    | 23             | 898               | 7,319                        | 1,020                  | 1                          | 1,120   | 9,459  |                    | 7,980             | 439          |              | 125        |                |                               |
| Lachlan                         | 6,000                             | 2,250      | 373        | 427   | 328           | 343                    | 946            | 2,290             | 12,957                       | 756                    | 284                        | 2,420   | 16,133   | 517                | 9,940             | 2,040        |              | 679        | 477            |                               |
| Macleay                         | 3,400                             | 711        | 241        | 543   | 583           | 73                     | 142            | 1,194             | 6,887                        | 60                     | 927                        | 67  | 7,014  | 29                 | 3,070             | 3,530        |              | 77         |                |                               |
| Manning                         | 5,100                             | 1,550      | 497        |       | 148           | 104                    | 175            | 1,346             | 8,920                        | 412                    | 529                        |   | 9,332  |                    | 7,850             | 526          |              | 373        |                |                               |
| Moonie/Macintyre                | 590                               | 152        | 2          | 2     | 30            | 5                      | 1              | 85                | 867                          | 44                     |                            |   | 911  | 60                 | 933               | 12           |              |            | 14             |                               |
| Murray                          | 9,660                             | 1,710      | 1,230      | 158   | 767           | 575                    | 89             | 1,684             | 15,873                       | 701                    | 2,726                      | 2,210   | 18,784   | 379                | 16,520            | 195          |              | 061        | 485            |                               |
| Murrumbidgee                    | 27,230                            | 6,620      | 2,340      | 2,170 | 1,460         | 1,730                  | 459            | 5,460             | 47,469                       | 898                    | 6,259                      | 3,160   | 51,527   | 9,270              | 14,650            | 19,300       |              | 744        | 20,200         |                               |
| Nambucca                        | 784                               | 314        | 42         | 77    | 54            | 1                      | 8              | 181               | 1,461                        |                        | 79                         |   | 1,461  |                    |                   | 1,480        |              |            |                |                               |
| Namoi                           | 8,240                             | 3,640      | 1,710      | 222   | 267           | 601                    | 23             | 1,979             | 16,682                       |                        | 5,313                      | 1,150   | 17,832   | 50                 | 8,170             | 7,290        |              |            |                |                               |
| Shoalhaven                      | 6,273                             | 1,685      | 1,255      | 620   | 279           | 75                     | 67             | 1,878             | 12,132                       | 178                    | 1,527                      | 1,930   | 14,240   |                    | 13,740            |              |              | 173        | 77             |                               |
| Snowy                           | 544                               | 45         | 27         | 3     | 67            | 2                      |                | 90                | 778                          | 59                     |                            | 83  | 920  | 5                  | 1,150             |              |              | 39         |                |                               |
| Tuggerah Lake                   | 9,130                             | 2,550      | 179        | 43    | 433           | 89                     |                | 1,498             | 13,922                       | 521                    | 238                        | 1   | 14,444   | 2,650              | 15,760            | 2            |              | 911        | 551            |                               |
| Tweed/Richmond                  | 12,690                            | 3,810      | 1,270      | 1,060 | 338           | 134                    | 129            | 3,210             | 22,640                       | 1,320                  | 619                        | 285   | 24,245   | 9,870              | 23,620            |              |              | 1,250      | 9,800          |                               |
| Totals                          | 151,000                           | 39,000     | 14,300     | 8,100 | 8,400         | 6,100                  | 3,200          | 33,000            | 259,000                      | 11,600                 | 27,900                     | 20,300  | 291,000  | 26,100             | 208,000           | 47,500       | 0            | 10,500     | 46,000         | 0                             |

**Note:**  
For water utilities which did not report their residential volume of water supplied together with commercial and/or industrial volume of water supplied, the percentages tabulated in *Table 8* were applied to their total potable urban water supplied (column 10) and the volume of water supplied for each category summed for each catchment to obtain the above values.



Table 8C: 2014-15 water conservation initiatives

| WATER UTILITY |                                    | CUSTOMER FOCUSED MEASURES  |                  |  |                         |                           | BUSINESS FOCUSED |                               | OTHER MEASURES  |                                       |                                       |                           |                           |               |  | WATER SUPPLIED                            |                            |                         |                       |                            | IWCM           |          |
|---------------|------------------------------------|----------------------------|------------------|--|-------------------------|---------------------------|------------------|-------------------------------|---|---------------------------------------|---------------------------------------|---------------------------|---------------------------|---------------|--|---|----------------------------|-------------------------|-----------------------|----------------------------|----------------|----------|
|               |                                    | Customer Education Program | Retrofit Program | Rebates for Water Efficient Appliances | Rebates for Water Tanks | Max Rainwater Tank Rebate | Effluent Reuse   | Water Loss Management Program | Other Demand Management Measures  | Sound Water Conservation Implemented? | Sound Drought Management Implemented? | Full Pay-For-Use Pricing? | Water Usage Charge per kL |               | Residential Revenue from Usage Charges | Average Annual Residential Water Supplied | Total Urban Water Supplied | Total Non Revenue Water | Real Losses (Leakage) |                            | Status of IWCM |          |
|               |                                    | Yes/No                     | Yes/No           | Yes/No                                 | Yes/No                  | \$                        | Yes/No           | Yes/No                        |   | (Yes/No)                              | (Yes/No)                              | (Yes/No)                  | Step 1 (c/kL)             | Step 2 (c/kL) | (%)                                    | (kL/property)                             | (ML)                       | (ML)                    | (ML)                  | (ML)                       | Evaluation     | Strategy |
|               |                                    | (1)                        | (2)              | (3)                                    | (4)                     | (5)                       | (6)              | (7)                           |   | (10)                                  | (11)                                  | (11a)                     | (12)                      | (13)          | (14) F4                                | (15) W12                                  | (16) W11                   | (17) W10.1              | (18)                  | (L/d/ connection) (19) A10 |                |          |
|               |                                    |                            |                  |  |                         |                           |                  |                               | (9)   |                                       |                                       |                           | 2014/15                   | 2014/15       | 2013/14                                | 2013/14                                   | 2013/14                    | 2013/14                 | 2013/14               | 2013/14                    | 2013/14        | 2013/14  |
| 11            | Albury City                        | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Waterwise program, water conservation strategy, separate metering (new & existing multi-unit developments), monitoring programs & customer surveys, free water audits (non-residential), review of conservation initiatives, grey water reuse guidelines, rainwater tank guidelines.  | Yes                                   | Yes                                   | Yes                       | 130                       | 227           | 75                                     | 205                                       | 7,627                      | 741                     | 445                   | 50                         | Y              | Y        |
| 29            | Armidale Dumaresq                  | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on website, giveaway shower timers and trigger nozzles, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 241                       | 320           | 79                                     | 198                                       | 2,920                      | 418                     | 366                   | 110                        |                |          |
| 24            | Ballina (Reticulator)              | Yes                        | Yes              | Yes                                    | Yes                     | 1500                      | Yes              | Yes                           | Voluntary permanent water saving measures, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 208                       | 313           | 66                                     | 181                                       | 4,219                      | 810                     | 729                   | 160                        | Y              | Y        |
| 100           | Balranald (Dual Supply)            | No                         | No               | No                                     |                         |                           | No               | No                            |   | Yes                                   | Yes                                   | Yes                       | 94                        | 141           | 47                                     | 167                                       | 774                        | 19                      | 11                    | 40                         |                |          |
| 21            | Bathurst Regional                  | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 180                       | 270           | 82                                     | 223                                       | 7,019                      | 583                     | 416                   | 80                         | Y              | Y        |
| 23            | Bega Valley (Unfiltered)           | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 270                       |               | 65*                                    | 137                                       | 3,461                      | 479                     | 213                   | 50                         |                |          |
| 47            | Bellingen (Unfiltered)             | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 163                       | 245           | 77                                     | 152                                       | 1,138                      | 149                     | 110                   | 70                         | Y              | Y        |
| 53            | Berrigan (Dual Supply)             | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Permanent water saving rules.   | Yes                                   | Yes                                   | Yes                       | 94                        |               | 40                                     | 241                                       | 2,545                      | 129                     | 115                   | 100                        |                |          |
| 72            | Bland (No WS)                      |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 262                        |                         |                       |                            |                |          |
| 78            | Blayney (No WS)                    |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 211                        |                         |                       |                            | Y              | Y        |
| 89            | Bogan                              | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 187                       |               | 57                                     | 339                                       | 723                        | 137                     | 77                    | 200                        | Y              | Y        |
| 97            | Bombala                            | No                         | No               | No                                     | No                      |                           | Yes              | No                            | Water restriction information on Council's website.   |                                       | Yes                                   | Yes                       | 130                       | 180           | 30*                                    | 188                                       | 275                        | 17                      | 10                    | 30                         |                |          |
| 104           | Boorowa                            | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 211                       | 422           | 49                                     | 185                                       | 214                        | 18                      | 9                     | 30                         |                |          |
| 87            | Bourke (Dual Supply)               | Yes                        | No               | No                                     | No                      |                           | No               | No                            | Member of the Savewater! Alliance, waterwise program with local schools.  | Yes                                   | Yes                                   | Yes                       | 216                       |               | 79                                     | 284                                       | 1,755                      | 41                      | 35                    | 80                         | Y              | Y        |
| 105           | Brewarrina (Dual Supply)           | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, installation of water meters in residential properties, water saving tips on Council's website, smart irrigation system on sporting fields.  | Yes                                   | Yes                                   | Yes                       | 190                       |               | 73                                     | 614                                       | 1,255                      | 31                      | 22                    | 110                        | Y              | Y        |
| 27            | Byron (Reticulator)                | Yes                        | Yes              | Yes                                    | Yes                     | 2170                      | Yes              | Yes                           | Pressure reduction  | Yes                                   | Yes                                   | Yes                       | 242                       | 363           | 73                                     | 180                                       | 3,384                      | 276                     | 193                   | 50                         | Y              | Y        |
| 91            | Cabonne                            | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 190                       | 450           | 56                                     | 150                                       | 255                        | 36                      | 32                    | 70                         | Y              | Y        |
| 92            | Carrathool (Groundwater)           | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Tips/suggestions in Council monthly newsletter.   | Yes                                   | Yes                                   | Yes                       | 90                        |               | 62                                     | 488                                       | 1,049                      | 59                      | 48                    | 100                        |                |          |
| 103           | Central Darling (Dual Supply)      | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 350                       |               | 79                                     | 128                                       | 361                        | 13                      | 8                     | 30                         |                |          |
| 40            | Central Tablelands (No Sge)        | Yes                        | No               | No                                     | No                      |                           | No               | No                            | Water Saving Tips on Website through membership of Savewater! Alliance and link to their website  | Yes                                   | Yes                                   | Yes                       | 236                       |               | 69*                                    | 187                                       | 1,712                      | 193                     | 121                   | 60                         | Y              | Y        |
| 14            | Clarence Valley                    | Yes                        | Yes              | Yes                                    | Yes                     | 1,100                     | Yes              | Yes                           | School waterwise program, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 191                       | 287           | 66                                     | 147                                       | 6,284                      | 1,553                   | 850                   | 110                        | Y              | Y        |
| 67            | Cobar                              |                            |                  | No                                     |                         |                           | No               | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 210                       | 310           | 77                                     | 342                                       | 948                        | 95                      | 57                    | 70                         | Y              | Y        |
| 66            | Cobar WB (Bulk Supplier) (No S     | No                         | No               | No                                     | No                      |                           | No               | No                            |   |                                       |                                       |                           |                           |               |  |   | 342                        |                         |                       |                            |                |          |
| 10            | Coffs Harbour                      | Yes                        | Yes              | Yes                                    | No                      |                           | Yes              | Yes                           | Rebate for water audits, separate metering of new and existing multi-unit developments, review of conservation measures, new for old showerhead replacement, showerhead and dual flush toilet rebates, Specialised Schools Education Program (Licenced by Water Corp), member of the Savewater! Alliance, water saving tips on Council's website. | Yes                                   | Yes                                   | Yes                       | 267                       | 401           | 76*                                    | 167                                       | 6,102                      | 572                     | 444                   | 50                         | Y              | Y        |
| 99            | Coolamon (No WS)                   |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   |                            |                         |                       |                            |                |          |
| 50            | Cooma-Monaro                       | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, rebate for water audits, separate metering for new multi-unit developments, monitoring to review effectiveness of conservation measures, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 162                       | 256           | 64*                                    | 339                                       | 1,533                      | 153                     | 92                    | 60                         | Y              |          |
| 75            | Coonamble (Groundwater)            | No                         | Yes              | No                                     | No                      |                           | Yes              | No                            |   |                                       | Yes                                   | Yes                       | 70                        | 110           | 71*                                    | 603                                       | 1,234                      | 123                     | 74                    | 120                        |                |          |
| 58            | Cootamundra (Reticulator)          | No                         | Yes              | No                                     | No                      |                           | Yes              | Yes                           |   |                                       | Yes                                   | Yes                       | 193                       |               | 53*                                    | 190                                       | 906                        | 116                     | 75                    | 70                         |                |          |
| 42            | Corowa                             | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 160                       | 240           | 82                                     | 287                                       | 3,116                      | 311                     | 223                   | 120                        | Y              | Y        |
| 26            | Essential Energy                   | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Rebates for dual flush toilets and specified garden products, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 174                       |               | 59                                     | 257                                       | 6,343                      | 465                     | 310                   | 80                         | Y              | Y        |
| 39            | Cowra                              | Yes                        | Yes              | No                                     | No                      |                           | No               | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 295                       |               | 79                                     | 241                                       | 3,014                      | 994                     | 220                   | 110                        |                |          |
| 54            | Deniliquin                         | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 85                        | 125           | 55*                                    | 474                                       | 1,882                      | 187                     | 150                   | 110                        | Y              |          |
| 18            | Dubbo                              | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 191                       |               | 74                                     | 327                                       | 8,587                      | 838                     | 670                   | 120                        | Y              | Y        |
| 15            | Eurobodalla                        | Yes                        | Yes              | Yes                                    | Yes                     | 1500                      | Yes              | Yes                           | Member of the Savewater! Alliance, integrated water cycle management study, WaterSmart Business Program, commercial water audits and financial incentives, dual flush toilet rebates, water usage calculator, water saving tips on Council's website, meter replacement program.  | Yes                                   | Yes                                   | Yes                       | 348                       |               | 58                                     | 114                                       | 3,516                      | 550                     | 329                   | 50                         | Y              | Y        |
| 12            | Fish River WS (Bulk Supplier) (N   | No                         | No               | No                                     | No                      |                           | No               | No                            |   | Yes                                   | Yes                                   |                           |                           |               |  |   | 2,699                      | 1,555                   | 1,555                 |                            |                |          |
| 51            | Forbes                             | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website, free garden mulch.   | Yes                                   | Yes                                   | Yes                       | 103                       |               | 66                                     | 352                                       | 2,349                      | 225                     | 123                   | 90                         |                |          |
| 84            | Gilgandra (Groundwater)            | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance & Lower Macquarie Water Utilities Alliance.   | Yes                                   | Yes                                   | Yes                       | 104                       |               | 70                                     | 521                                       | 930                        | 92                      | 67                    | 140                        |                |          |
| 60            | Glen Innes Severn                  | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 215                       | 323           | 52                                     | 131                                       | 510                        | 50                      | 38                    | 30                         | Y              | Y        |
| 28B           | Goldenfields (Bulk Supplier) (No S |                            |                  |  |                         |                           | No               | No                            |   | Yes                                   | Yes                                   |                           |                           |               |  |   | 440                        | 440                     | 440                   |                            |                |          |
| 28A           | Goldenfields (Reticulator) (No S   | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Inclusion of meter reading information for customers to do overnight leakage meter readings with two quarterly water accounts. Also included on the website.  | Yes                                   | Yes                                   | Yes                       | 217                       |               | 78                                     | 272                                       | 6,183                      | 605                     | 363                   | 90                         |                |          |



Table 8C: 2014-15 water conservation initiatives

| WATER UTILITY |                                      | CUSTOMER FOCUSED MEASURES  |                  |  |                         |                           | BUSINESS FOCUSED |                               | OTHER MEASURES  |                                       |                                       |                           |                           |               |  | WATER SUPPLIED                            |                            |                         |                       |      | IWCM           |                   |            |          |
|---------------|--------------------------------------|----------------------------|------------------|--|-------------------------|---------------------------|------------------|-------------------------------|---|---------------------------------------|---------------------------------------|---------------------------|---------------------------|---------------|--|---|----------------------------|-------------------------|-----------------------|------|----------------|-------------------|------------|----------|
|               |                                      | Customer Education Program | Retrofit Program | Rebates for Water Efficient Appliances | Rebates for Water Tanks | Max Rainwater Tank Rebate | Effluent Reuse   | Water Loss Management Program | Other Demand Management Measures  | Sound Water Conservation Implemented? | Sound Drought Management Implemented? | Full Pay-For-Use Pricing? | Water Usage Charge per kL |               | Residential Revenue from Usage Charges | Average Annual Residential Water Supplied | Total Urban Water Supplied | Total Non Revenue Water | Real Losses (Leakage) |      | Status of IWCM |                   |            |          |
|               |                                      |                            |                  |  |                         |                           |                  |                               |   |                                       |                                       |                           | Step 1 (c/kL)             | Step 2 (c/kL) |  |   |                            |                         | (ML)                  | (ML) | (ML)           | (L/d/ connection) | Evaluation | Strategy |
|               |                                      |                            |                  |  |                         |                           |                  |                               |   |                                       |                                       |                           |                           |               |  |   |                            |                         |                       |      |                |                   |            |          |
| Yes/No        | Yes/No                               | Yes/No                     | Yes/No           | \$                                     | Yes/No                  | Yes/No                    | (9)              | (10)                          | (11)  | (11a)                                 | (12)                                  | (13)                      | (14) F4                   | (15) W12      | (16) W11                               | (17) W10.1                                | (18)                       | (19) A10                | (20)                  | (21) |                |                   |            |          |
| (1)           | (2)                                  | (3)                        | (4)              | (5)                                    | (6)                     | (7)                       | (9)              | (10)                          | (11)  | (11a)                                 | (12)                                  | (13)                      | (14) F4                   | (15) W12      | (16) W11                               | (17) W10.1                                | (18)                       | (19) A10                | (20)                  | (21) |                |                   |            |          |
| 1             | Gosford                              | Yes                        | No               | No                                     | Yes                     | 500                       | Yes              | Yes                           | Mandatory rain water tanks for new houses and extensions, major water user audits, promoting effluent reuse schemes, main replacement program, water saving tips on Council's website   | Yes                                   | Yes                                   | Yes                       | 226                       |               | 73                                     | 160                                       | 15,359                     | 1,784                   | 1,418                 | 60   | Y              | Y                 |            |          |
| 20            | Goulburn Mulwaree                    | Yes                        | Yes              | Yes                                    | No                      |                           | Yes              | Yes                           | Showerhead and dual flush toilet rebates.   | Yes                                   | Yes                                   | Yes                       | 280                       | 378           | 65*                                    | 139                                       | 2,748                      | 319                     | 258                   | 70   | Y              | Y                 |            |          |
| 80            | Greater Hume                         | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 160                       | 240           | 59                                     | 244                                       | 648                        | 101                     | 65                    | 90   | Y              |                   |            |          |
| 30            | Griffith                             | Yes                        | Yes              | Yes                                    | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website, rebates for 4 star toilets and 3 star shower roses.   | Yes                                   | Yes                                   | Yes                       | 67                        | 130           | 82*                                    | 545                                       | 7,215                      | 643                     | 390                   | 110  | Y              |                   |            |          |
| 94            | Gundagai                             |                            |                  |  |                         |                           | Yes              | Yes                           | Water Restriction information on website and in news articles   | Yes                                   | Yes                                   | Yes                       | 125                       | 170           | 77                                     | 396                                       | 600                        | 64                      | 40                    | 90   |                |                   |            |          |
| 44            | Gunnedah (Groundwater)               | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of Save Water Alliance   | Yes                                   | Yes                                   | Yes                       | 108                       | 162           | 74*                                    | 427                                       | 3,104                      | 248                     | 124                   | 80   | Y              | Y                 |            |          |
| 90            | Guyra                                | No                         | No               | No                                     | No                      |                           | No               | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 155                       | 185           | 65                                     | 177                                       | 446                        | 47                      | 36                    | 70   |                |                   |            |          |
| 81            | Gwydir                               | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 125                       | 195           | 76                                     | 320                                       | 816                        | 96                      | 48                    | 80   | Y              | Y                 |            |          |
| 76            | Harden (Reticulator)                 | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 220                       | 329           | 52                                     | 181                                       | 723                        | 69                      | 41                    | 60   |                |                   |            |          |
| 7             | Port Macquarie-Hastings (Unfiltered) | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Encourage use of rainwater tank, separate metering for new and encourage separate metering for existing multi-unit development, permanent water conservation measures, meter replacement program, water saving tips on Council's website. | Yes                                   | Yes                                   | Yes                       | 270                       | 540           | 68                                     | 151                                       | 6,612                      | 611                     | 456                   | 40   | Y              |                   |            |          |
| 30A           | Hawkesbury (No WS)                   |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 18                         |                         |                       |      | Y              |                   |            |          |
| 86            | Hay (Dual Supply)                    | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 110                       | 165           | 57                                     | 159                                       | 1,469                      | 45                      | 45                    | 50   |                |                   |            |          |
| 37            | Inverell                             | No                         | No               | No                                     | No                      |                           | No               | No                            |   | Yes                                   | Yes                                   | Yes                       | 137                       | 160           | 45                                     | 180                                       | 1,809                      | 209                     | 109                   | 50   |                |                   |            |          |
| 106           | Jerilderie (Dual Supply)             | Yes                        | No               | No                                     | No                      |                           | Yes              | No                            | Water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 152                       | 177           | 58*                                    | 219                                       | 545                        | 12                      | 7                     | 40   |                |                   |            |          |
| 77            | Junee (No WS)                        |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 147                        |                         |                       |      |                |                   |            |          |
| 25            | Kempsey (Groundwater)                | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, reviewing Demand Management Policy, website links to water saving tips, bus shelter posters, themed drink bottles  | Yes                                   | Yes                                   | Yes                       | 219                       | 316           | 59                                     | 156                                       | 3,776                      | 756                     | 409                   | 100  | Y              | Y                 |            |          |
| 70            | Kyogle                               | Yes                        | Yes              | No                                     | Yes                     | 670                       | Yes              | No                            | Member of the Savewater! Alliance   | Yes                                   | Yes                                   | Yes                       | 150                       | 190           | 41                                     | 145                                       | 494                        | 42                      | 25                    | 30   | Y              | Y                 |            |          |
| 59            | Lachlan                              | Yes                        | No               | No                                     | No                      |                           | Yes              | No                            |   | Yes                                   | Yes                                   | Yes                       | 220                       | 330           | 78                                     | 517                                       | 2,035                      | 213                     | 134                   | 140  |                |                   |            |          |
| 48            | Leeton                               | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Separate metering of new multi-unit developments, converting town parks to raw water, restricting all new residential meters to 20mm.   | Yes                                   | Yes                                   | Yes                       | 91                        | 133           | 66                                     | 431                                       | 2,700                      | 303                     | 243                   | 150  | Y              |                   |            |          |
| 22            | Lismore (Reticulator)                | Yes                        | Yes              | No                                     | No                      |                           | Yes              | No                            | Water Saving Tips on Council's website, information on rainwater tanks, educational centre  | Yes                                   | Yes                                   | Yes                       | 322                       |               | 70                                     | 155                                       | 3,178                      | 315                     | 194                   | 40   | Y              | Y                 |            |          |
| 31            | Lithgow                              | Yes                        | No               | Yes                                    | Yes                     | 300                       | No               | No                            | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 311                       | 467           | 83                                     | 132                                       | 1,522                      | 152                     | 91                    | 30   | Y              |                   |            |          |
| 61            | Liverpool Plains                     | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 128                       | 208           | 41                                     | 190                                       | 870                        | 125                     | 95                    | 100  | Y              |                   |            |          |
| 102           | Lockhart (No WS)                     |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 2                          |                         |                       |      | Y              |                   |            |          |
| 5             | MidCoast                             | Yes                        | Yes              | Yes                                    | Yes                     | 1500                      | Yes              | Yes                           | Water saving tips on Council's website and in customer newsletters.   | Yes                                   | Yes                                   | Yes                       | 292                       | 326           | 72                                     | 142                                       | 9,156                      | 1,346                   | 812                   | 60   | Y              | Y                 |            |          |
| 32            | Mid Western Regional                 | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Links to Save water web sites on council's own site   | Yes                                   | Yes                                   | Yes                       | 281                       |               | 80                                     | 185                                       | 2,575                      | 344                     | 172                   | 60   |                |                   |            |          |
| 38            | Moree Plains (Groundwater)           | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 158                       | 205           | 75*                                    | 538                                       | 3,335                      | 433                     | 288                   | 160  | Y              |                   |            |          |
| 65            | Murray (Dual Supply)                 | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 96                        |               | 51                                     | 168                                       | 1,275                      | 108                     | 92                    | 90   | Y              |                   |            |          |
| 101           | Murrumbidgee (Groundwater)           | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           | Rainwater tank guidelines, encouraging retrofit program.  |                                       |                                       | Yes                       | 40                        | 60            | 63                                     | 635                                       | 794                        | 84                      | 53                    | 170  |                |                   |            |          |
| 41            | Muswellbrook                         | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance (restructured in March 2015), water saving tips on Council's website. Continued application of 2 tier billing system.   | Yes                                   | Yes                                   | Yes                       | 160                       | 240           | 69*                                    | 245                                       | 2,989                      | 210                     | 126                   | 60   | Y              | Y                 |            |          |
| 34            | Nambucca (Groundwater)               | No                         | No               | Yes                                    | Yes                     | 1500                      | Yes              | Yes                           | Member of the Savewater Alliance, rainwater tank rebates, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 290                       |               | 77                                     | 134                                       | 1,453                      | 181                     | 155                   | 70   | Y              | Y                 |            |          |
| 46            | Narrabri (Groundwater)               | Yes                        | Yes              | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 90                        |               | 56                                     | 308                                       | 2,608                      | 602                     | 292                   | 200  |                |                   |            |          |
| 63            | Narrandera (Groundwater)             | No                         | No               | No                                     | No                      |                           | Yes              | No                            | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 102                       |               | 72                                     | 678                                       | 2,177                      | 232                     | 146                   | 180  |                |                   |            |          |
| 62            | Narromine (Groundwater)              | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 115                       |               | 74                                     | 452                                       | 1,292                      | 159                     | 133                   | 160  | Y              | Y                 |            |          |
| 83            | Oberon (Reticulator)                 | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 280                       |               | 75                                     | 148                                       | 719                        | 92                      | 49                    | 100  | Y              |                   |            |          |
| 19            | Orange                               | Yes                        | Yes              | No                                     | Yes                     | 650                       | Yes              | Yes                           | Showerhead replacement program, Rainwater Tank Rebates, Orange Water Security website, Savewater Alliance   | Yes                                   | Yes                                   | Yes                       | 220                       | 330           | 70                                     | 170                                       | 7,307                      | 649                     | 403                   | 60   | Y              | Y                 |            |          |
| 71            | Palerang                             | Yes                        | Yes              | Yes                                    | Yes                     | 800                       | Yes              | Yes                           | Mandatory water conservation measures.  | Yes                                   | Yes                                   | Yes                       | 222                       | 349           | 47                                     | 158                                       | 549                        | 98                      | 74                    | 90   |                |                   |            |          |
| 36            | Parkes                               | Yes                        | Yes              | Yes                                    | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, non-potable supply for stock, roadworks and swimming pools, IWCM Strategy, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 180                       | 320           | 76                                     | 276                                       | 4,683                      | 543                     | 380                   | 160  | Y              | Y                 |            |          |

Table 8C: 2014-15 water conservation initiatives

| WATER UTILITY          |                                 | CUSTOMER FOCUSED MEASURES  |                  |  |                         |                           | BUSINESS FOCUSED |                               | OTHER MEASURES  |                                       |                                       |                           |                           |               |  | WATER SUPPLIED                            |                            |                         |                       |                   | IWCM           |          |
|------------------------|---------------------------------|----------------------------|------------------|--|-------------------------|---------------------------|------------------|-------------------------------|---|---------------------------------------|---------------------------------------|---------------------------|---------------------------|---------------|--|---|----------------------------|-------------------------|-----------------------|-------------------|----------------|----------|
|                        |                                 | Customer Education Program | Retrofit Program | Rebates for Water Efficient Appliances | Rebates for Water Tanks | Max Rainwater Tank Rebate | Effluent Reuse   | Water Loss Management Program | Other Demand Management Measures  | Sound Water Conservation Implemented? | Sound Drought Management Implemented? | Full Pay-For-Use Pricing? | Water Usage Charge per kL |               | Residential Revenue from Usage Charges | Average Annual Residential Water Supplied | Total Urban Water Supplied | Total Non Revenue Water | Real Losses (Leakage) |                   | Status of IWCM |          |
|                        |                                 |                            |                  |  |                         |                           |                  |                               |   |                                       |                                       |                           | Step 1 (c/kL)             | Step 2 (c/kL) |  |   |                            |                         | (ML)                  | (L/d/ connection) | Evaluation     | Strategy |
|                        |                                 |                            |                  |  |                         |                           |                  |                               |   |                                       |                                       |                           |                           |               |  |   |                            |                         |                       |                   |                |          |
| Yes/No                 | Yes/No                          | Yes/No                     | Yes/No           | \$                                     | Yes/No                  | Yes/No                    | (9)              | (Yes/No)                      | (Yes/No)  | (Yes/No)                              | Step 1 (c/kL)                         | Step 2 (c/kL)             | (%)                       | (kL/property) | (ML)                                   | (ML)                                      | (ML)                       | (ML)                    | (L/d/ connection)     | Evaluation        | Strategy       |          |
| (1)                    | (2)                             | (3)                        | (4)              | (5)                                    | (6)                     | (7)                       | (9)              | (10)                          | (11)  | (11a)                                 | (12)                                  | (13)                      | (14) F4                   | (15) W12      | (16) W11                               | (17) W10.1                                | (18)                       | (19) A10                | (20)                  | (21)              |                |          |
|                        |                                 |                            |                  |  |                         |                           |                  |                               |   |                                       |                                       |                           |                           |               |  |   |                            |                         |                       |                   |                |          |
| 17                     | Queanbeyan (Reticulator)        | Yes                        | Yes              | Yes                                    | Yes                     | 1100                      | No               | Yes                           | Subsidised garden mulch, free water audits, free home tune-up, free AAA shower rose, free dual flush toilet, subsidies for commercial properties.   | Yes                                   | Yes                                   | Yes                       | 297                       | 456           | 61                                     | 173                                       | 3,937                      | 493                     | 375                   | 80                | Y              |          |
| 33                     | Richmond Valley                 | Yes                        | Yes              | Yes                                    | Yes                     |                           | Yes              | Yes                           | Rebates for water efficient showerheads and dual flush toilets, water saving tips on Council's website, voluntary permanent water saving measures.  | Yes                                   | Yes                                   | Yes                       | 203                       | 307           | 75                                     | 172                                       | 2,848                      | 277                     | 192                   | 80                | Y              | Y        |
| 8                      | Riverina (Groundwater) (No Sge) | Yes                        | Yes              | No                                     | No                      |                           | No               | Yes                           | Community awareness at regional and local expo's, school education, WTP site visits   | Yes                                   | Yes                                   | Yes                       | 140                       | 210           | 74                                     | 311                                       | 15,623                     | 1,562                   | 937                   | 90                | Y              | Y        |
| 4                      | Rous (Bulk Supplier) (No Sge)   | Yes                        | No               | Yes                                    | Yes                     | 2170                      | No               | No                            | School Grants, Schools Education Programmes, Blue and Green Business Programme, Community Engagement Programmes   | Yes                                   | Yes                                   |                           |                           |               |  |   | 1,314                      | 508                     | 230                   |                   | Y              | Y        |
| 3                      | Shoalhaven                      | Yes                        | Yes              | No                                     | Yes                     | 500                       | Yes              | Yes                           | Monitoring demand, participation in National Water Week (Competitions, Treatment Plant Tours, Tapstar show, Community display), Marketing & Education activities at Local Community Events, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 165                       |               | 75*                                    | 142                                       | 14,169                     | 1,878                   | 1,596                 | 90                | Y              | Y        |
| 35                     | Singleton                       | Yes                        | Yes              | Yes                                    | Yes                     | 450                       | Yes              | No                            | Member of the Savewater! Alliance, rebates for dual flush toilets & rainwater tanks, WaterWise Education Program, WaterWise Compost Gardens, water saving tips on Council's website, 75% to 25% Split Billing - User Pays for Usage.  | Yes                                   | Yes                                   | Yes                       | 135                       | 245           | 69*                                    | 251                                       | 3,742                      | 261                     | 177                   | 70                | Y              |          |
| 52                     | Snowy River (Unfiltered)        | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, DCP rainwater tanks and dual flush toilets required in new residential developments, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 230                       | 350           | 41                                     | 83  | 645                        | 73                      | 73                    | 70                | Y              | Y        |
| 13                     | Tamworth Regional               | Yes                        | Yes              | Yes                                    | Yes                     | 500                       | Yes              | Yes                           | Member of the WEGS, separate metering for new multi-unit developments, water management plan for premises, Residential Water Saver Rebate Scheme, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 145                       | 218           | 55                                     | 188                                       | 7,967                      | 783                     | 548                   | 70                | Y              | Y        |
| 69                     | Temora (No WS)                  |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 99                         |                         |                       |                   |                |          |
| 68                     | Tenterfield                     | No                         | No               | No                                     | No                      |                           | Yes              | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 228                       | 262           | 44                                     | 143                                       | 400                        | 35                      | 21                    | 30                | Y              | Y        |
| 93                     | Tumbarumba                      | Yes                        | Yes              | No                                     | No                      |                           | No               | Yes                           | Council guidance and support with planning and installation of rainwater systems. Town night flow trend is monitored to find out major leaks.   | Yes                                   | Yes                                   | Yes                       | 209                       | 351           | 49                                     | 139                                       | 275                        | 58                      | 35                    | 80                | Y              |          |
| 43                     | Tumut                           | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 211                       |               | 78*                                    | 219                                       | 1,574                      | 143                     | 114                   | 70                | Y              |          |
| 6                      | Tweed                           | Yes                        | No               | Yes                                    | No                      |                           | Yes              | Yes                           | Target 170L/p/d for residential customers   | Yes                                   | Yes                                   | Yes                       | 270                       | 405           | 75*                                    | 178                                       | 9,166                      | 1,024                   | 520                   | 60                | Y              | Y        |
| 45                     | Upper Hunter                    | Yes                        | Yes              | No                                     | Yes                     | 400                       | Yes              | Yes                           | Member of the Savewater! Alliance, water saving tips on Council's website.  | Yes                                   | Yes                                   | Yes                       | 192                       | 307           | 73*                                    | 306                                       | 2,700                      | 427                     | 373                   | 240               |                |          |
| 73                     | Upper Lachlan                   | Yes                        | No               | No                                     | No                      |                           | Yes              | No                            | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 269                       | 356           | 47*                                    | 143                                       | 388                        | 68                      | 23                    | 30                |                |          |
| 85                     | Uralla                          | No                         | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Namoi Water Alliance  | Yes                                   | Yes                                   | Yes                       | 220                       |               | 57*                                    | 185                                       | 320                        | 30                      | 9                     | 20                | Y              | Y        |
| 107                    | Urana (No WS)                   |                            |                  |  |                         |                           | No               | No                            |   |                                       |                                       |                           |                           |               |  |   |                            |                         |                       |                   | Y              |          |
| 9                      | Wagga Wagga (No WS)             |                            |                  |  |                         |                           | Yes              | No                            | Water saving tips on Council's website.   |                                       |                                       |                           |                           |               |  |   | 249                        |                         |                       |                   | Y              |          |
| 88                     | Wakool (Dual Supply)            | Yes                        | Yes              |  | No                      |                           | Yes              | Yes                           | Permanent water saving rules, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 100                       | 158           | 36                                     | 142                                       | 772                        | 37                      | 26                    | 50                |                |          |
| 98                     | Walcha                          | Yes                        | Yes              | No                                     | No                      |                           | No               | Yes                           | Walcha Council has continued with the "Water Matters" initiative showing the community how they are performing in terms of average litres of water consumed per person per day, and whether it meets the current water restriction target. This "Water Matters" is presented in the local paper called the Apsley Advocate which is delivered free to all households. | Yes                                   |                                       | Yes                       | 272                       | 396           | 64                                     | 124                                       | 173                        | 20                      | 19                    | 60                | Y              | Y        |
| 79                     | Walgett (Dual Supply)           | No                         | No               | No                                     | No                      |                           | No               | No                            | Member of the Savewater! Alliance, installation of water meters in residential properties,water use restrictions throughout the year.   | Yes                                   | Yes                                   | Yes                       | 76                        | 106           | 57*                                    | 720                                       | 3,256                      | 221                     | 140                   | 200               | Y              |          |
| 96                     | Warren (Dual Supply)            | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater! Alliance.  | Yes                                   | Yes                                   | Yes                       | 103                       | 155           | 52                                     | 328                                       | 836                        | 65                      | 35                    | 100               | Y              | Y        |
| 55                     | Warrumbungle                    | No                         | No               | No                                     | No                      |                           | Yes              | No                            | Voluntary water restrictions.   | Yes                                   | Yes                                   | Yes                       | 190                       |               | 51*                                    | 197                                       | 1,010                      | 252                     | 239                   | 210               | Y              |          |
| 95                     | Weddin (No WS)                  |                            |                  |  |                         |                           | Yes              | No                            |   |                                       |                                       |                           |                           |               |  |   | 12                         |                         |                       |                   | Y              | Y        |
| 57                     | Wellington                      | Yes                        | No               | No                                     | No                      |                           | No               | Yes                           | Member of the Savewater Alliance.   | Yes                                   | Yes                                   | Yes                       | 203                       | 207           | 66                                     | 213                                       | 1,295                      | 249                     | 90                    | 90                | Y              | Y        |
| 74                     | Wentworth (Dual Supply)         | No                         | No               | No                                     | No                      |                           | No               | No                            |   | Yes                                   | Yes                                   | Yes                       | 120                       | 280           | 48                                     | 99  | 1,283                      | 42                      | 25                    | 20                | Y              |          |
| 16                     | Wingecarribee                   | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Water Wise Initiatives on Council's website.  | Yes                                   | Yes                                   | Yes                       | 178                       | 267           | 68                                     | 178                                       | 4,535                      | 495                     | 400                   | 60                | Y              | Y        |
| 2                      | Wyong                           | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           |   | Yes                                   | Yes                                   | Yes                       | 226                       |               | 67*                                    | 150                                       | 14,444                     | 1,498                   | 696                   | 30                | Y              | Y        |
| 56                     | Yass Valley                     | Yes                        | Yes              | No                                     | Yes                     | 200                       | No               | Yes                           | higher access charges for larger services, higher usage charges, free supply of water restrictors, rebate for rainwater tanks, compulsory rainwater tanks for new dwellings and encourages retrofitting.  | Yes                                   | Yes                                   | Yes                       | 290                       |               | 53                                     | 161                                       | 844                        | 209                     | 106                   | 90                | Y              | Y        |
| 49                     | Young (Reticulator)             | Yes                        | No               | No                                     | No                      |                           | Yes              | Yes                           | Member of the Savewater! Alliance, some stormwater use, separate metering of new and some existing multi-unit developments, water saving tips on Council's website.   | Yes                                   | Yes                                   | Yes                       | 270                       |               | 69                                     | 166                                       | 1,421                      | 124                     | 92                    | 60                |                |          |
| Total LWUs             |                                 | 73                         | 33               | 17                                     | 18                      | 17                        | 75               | 75                            |   | 93                                    | 93                                    | 93                        | Median                    | Median        | Median                                 | Median                                    | Median                     | Median                  | Median                | Median            | 69             | 48       |
| Percent "Yes" (Retail) |                                 | 79%                        | 36%              | 18%                                    | 20%                     | 18%                       | 76%              | 82%                           |   | Percent "Yes"                         | 97%                                   | 97%                       | 100%                      | 226           | 72                                     | 166                                       | 7,000                      |                         | 60                    | 66%               | 46%            |          |



Table 8D: 2014-15 Components of commercial, industrial, rural and municipal water supplied

| WATER UTILITY |                              | COMMERCIAL      |                         | INDUSTRIAL                     |                 |                        |                                    |                     |                                       |                 |                        | RURAL                              |                         | MUNICIPAL<br>(Institutional, Public Parks and Gardens) |       |   |                            | VOLUME OF WATER SUPPLIED<br>NON-RES<br>(Commercial, Industrial, Rural, Municipal) |                             |   | TOTAL<br>VOLUME of<br>WATER<br>PRODUCED        | RECYCLED  | URBAN<br>STORMWATER             |                  |
|---------------|------------------------------|-----------------|-------------------------|--------------------------------|-----------------|------------------------|------------------------------------|---------------------|---------------------------------------|-----------------|------------------------|------------------------------------|-------------------------|--|-------|---|----------------------------|---|-----------------------------|---|--|---|---------------------------------|------------------|
|               |                              | Potable<br>(ML) | Non-<br>potable<br>(ML) | Potable<br>(ML)                |                 |                        |                                    | Non-potable<br>(ML) |                                       |                 |                        | Potable<br>(ML)                    | Non-<br>potable<br>(ML) | Potable<br>(ML)  |       | Non-potable<br>(ML)                     |                            | Potable<br>(ML)   | Non-potable<br>(ML)         | Volume<br>Supplied<br>(ML)                              | Potable<br>(ML)                                | Commercial,<br>Industrial,<br>Municipal<br>(ML) | Total Volume<br>Used<br>(ML)    |                  |
|               |                              | (55)            | (63a)                   | Total<br>Industrial<br>Potable | Mining<br>(56a) | Manufacturing<br>(56b) | Electricity<br>Generation<br>(56c) | Other<br>(56d)      | Total<br>Industrial<br>Non<br>Potable | Mining<br>(63b) | Manufacturing<br>(63c) | Electricity<br>Generation<br>(63d) | Other<br>(63e)          | (57)   | (63f) | Excluding<br>Parks &<br>Gardens<br>(58) | Parks &<br>Gardens<br>(60) | Excluding<br>Parks &<br>Gardens<br>(63g)  | Parks &<br>Gardens<br>(63h) | W9.1<br><br>Sum(55), (56a<br>to d), (57), (58),<br>(60) | W9.2<br><br>Sum (63a to h)<br>+ (151)<br>(63i) | W9<br>=W9.1+W9.2+<br>W21                        | W11.3<br>=W11.1+W14.1 -<br>W5.1 | W21<br><br>(151) |
|               | Sydney Water<br>Hunter Water |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 515,834<br>67,014                                       |  | 515,834<br>67,014                               | 9,682<br>2,858                  | 0                |

LWUs with > 10,000 Properties

|   |  |        |     |       |       |       |       |       |       |       |       |       |       |       |     |       |       |       |        |        |        |        |         |       |    |
|---|--|--------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|--------|--------|--------|--------|---------|-------|----|
| 1                                       | Gosford  | 1,279  | 5   | 563   | 388   | 2     | 173   |       |       | 10    |       | 481   | 174   |       | 3   | 2,507 | 21    | 2,541 | 13,103 | 13     | 24     |        |         |       |    |
| 2                                       | Wyong  | 2,548  |     | 179   | 179   |       |       |       |       | 43    | 0     | 433   | 89    |       |     | 3,292 | 521   | 4,334 | 16,021 | 521    |        |        |         |       |    |
| 3                                       | Shoalhaven   | 1,685  | 6   | 1,255 | 1,255 |       |       | 1,897 | 1,897 | 620   | 20    | 279   | 75    |       |     | 3,914 | 2,101 | 6,193 | 12,065 | 178    |        |        |         |       |    |
| 4                                       | Rous (Bulk Supplier) (NO SGE)                      | 38     |     |       |       |       |       |       |       | 768   |       |       |       |       |     | 806   |       | 806   | 11,183 |        |        |        |         |       |    |
| 5                                       | MidCoast   | 1,547  |     | 497   |       |       | 497   |       |       |       |       | 148   | 104   |       |     | 2,296 | 412   | 3,120 | 8,744  | 412    |        |        |         |       |    |
| 6                                       | Tweed  | 1,443  |     | 182   | 119   |       | 63    |       |       | 117   |       | 232   | 123   |       |     | 2,097 | 500   | 3,097 | 8,661  | 500    |        |        |         |       |    |
| 7                                       | Port Macquarie-Hastings (Unfiltered)               | 947    | 28  | 29    |       |       | 29    |       |       | 35    |       | 252   | 56    | 164   | 3   | 1,319 | 494   | 2,112 | 6,118  | 299    |        |        |         |       |    |
| 8                                       | Riverina (Groundwater) (NO SGE)                    | 1,977  |     | 1,251 | 1,234 | 17    |       |       |       | 1,017 |       | 687   | 616   |       |     | 5,548 |       | 5,548 | 15,591 |        |        |        |         |       |    |
| 10                                      | Coffs Harbour                                      | 1,147  |     |       |       |       |       |       |       |       | 9     | 63    | 90    |       |     | 1,300 | 318   | 1,927 | 5,784  | 309    |        |        |         |       |    |
| 11                                      | Albury   | 585    | 213 | 223   |       |       | 223   | 3     | 3     | 38    |       | 600   | 387   | 1     |     | 1,833 | 217   | 2,050 | 7,788  |        |        |        |         |       |    |
| 12                                      | Fish River WS (Unfiltered, Bulk Supplier) (NO SGE) |        |     |       |       |       |       | 1,024 | 1,024 | 120   |       |       |       |       |     | 120   | 1,024 | 1,144 | 2,426  |        |        |        |         |       |    |
| 13                                      | Tamworth Regional                                  | 1,063  |     | 1,666 |       |       | 1,666 |       |       | 151   | 140   | 49    | 424   |       |     | 3,353 | 140   | 3,493 | 7,827  |        |        |        |         |       |    |
| 14                                      | Clarence Valley                                    | 747    |     | 368   |       |       | 368   |       |       | 488   | 47    |       | 93    |       |     | 1,696 | 242   | 2,133 | 6,042  | 195    |        |        |         |       |    |
| 15                                      | Eurobodalla  | 468    |     | 6     | 6     |       |       |       |       | 13    |       | 125   | 19    |       |     | 631   | 223   | 1,077 | 3,293  | 223    |        |        |         |       |    |
| 16                                      | Wingecarribee                                      | 537    |     |       |       |       |       |       |       | 141   |       | 250   | 20    |       |     | 948   |       | 948   | 4,535  |        |        |        |         |       |    |
| 17                                      | Queanbeyan (Reticulator)                           | 253    |     | 140   |       |       | 140   |       |       |       |       | 69    | 145   |       |     | 607   |       | 607   | 0      |        |        |        |         |       |    |
| 18                                      | Dubbo  | 1,043  |     | 32    |       |       | 32    |       |       | 39    |       | 605   | 734   | 28    | 180 | 2,453 | 208   | 2,661 | 8,379  |        |        |        |         |       |    |
| 19                                      | Orange   | 670    |     | 79    | 79    |       |       |       |       | 115   |       | 201   | 50    |       |     | 1,115 | 2,826 | 6,767 | 4,481  | 2,826  |        |        |         |       |    |
| 20                                      | Goulburn Mulwaree                                  | 234    | 9   | 270   |       |       | 270   | 0     | 0     | 9     | 1     | 264   | 45    |       |     | 822   | 204   | 1,220 | 2,546  | 194    |        |        |         |       |    |
| 21                                      | Bathurst Regional                                  | 1,131  |     | 1,003 | 1,003 |       |       | 1,003 | 1,003 | 22    |       |       |       | 5     | 34  | 2,156 | 1,042 | 3,198 | 5,951  |        |        |        |         |       |    |
| 22                                      | Lismore (Reticulator)                              | 788    |     |       |       |       |       |       |       | 116   |       |       |       |       |     | 904   |       | 904   | 0      |        |        |        |         |       |    |
| 23                                      | Bega Valley (Unfiltered)                           | 445    |     | 72    | 29    |       | 43    |       |       | 5     | 57    | 182   | 43    |       |     | 747   | 424   | 1,538 | 3,037  | 367    |        |        |         |       |    |
| 24                                      | Ballina (Reticulator)                              | 372    |     | 16    | 13    | 1     | 2     |       |       | 43    |       | 106   | 10    |       |     | 547   | 517   | 1,581 | 98     | 517    |        |        |         |       |    |
| 25                                      | Kempsey (Groundwater)                              | 426    |     | 241   | 5     | 236   |       |       |       | 448   |       | 129   | 11    |       |     | 1,255 | 60    | 1,375 | 3,743  | 60     |        |        |         |       |    |
| 26                                      | Essential Energy                                   | 280    | 61  | 1,182 | 1,182 |       |       | 366   | 366   |       | 107   | 270   | 27    | 143   | 195 | 1,759 | 1,648 | 4,183 | 4,695  | 776    |        |        |         |       |    |
| 27                                      | Byron (Reticulator)                                | 777    |     |       |       |       |       |       |       |       |       |       |       |       | 285 | 777   | 573   | 1,638 | 440    | 288    |        |        |         |       |    |
| 28A                                     | Goldenfields (Reticulator) (NO SGE)                | 625    | 9   | 10    |       |       | 10    |       |       | 2,430 | 86    | 304   | 157   | 8     | 8   | 3,526 | 111   | 3,637 | 290    |        |        |        |         |       |    |
| 28B                                     | Goldenfields (Bulk Supplier) (NO SGE)              |        |     |       |       |       |       |       |       |       |       |       |       |       |     |       |       | 0     | 9,151  |        |        |        |         |       |    |
| Totals for LWUs with >10,000 Properties |  | 23,055 | 331 | 9,264 | 1,366 | 4,362 | 20    | 3,516 | 4,293 | 366   | 1,897 | 1,024 | 1,006 | 6,788 | 467 | 5,729 | 3,492 | 349   | 708    | 48,328 | 13,826 | 69,832 | 171,992 | 7,678 | 24 |

LWUs with 3,001 - 10,000 Properties

|    |                        |       |     |       |    |       |  |     |       |       |    |     |     |     |     |       |       |       |       |     |  |
|----|------------------------|-------|-----|-------|----|-------|--|-----|-------|-------|----|-----|-----|-----|-----|-------|-------|-------|-------|-----|--|
| 29 | Armidale Dumaresq      | 249   | 8   |       |    |       |  |     |       | 92    | 56 | 444 | 55  |     |     | 840   | 64    | 904   | 2,856 |     |  |
| 30 | Griffith               | 1,216 | 180 |       |    |       |  |     |       | 377   | 12 | 261 | 260 | 187 | 186 | 2,114 | 565   | 2,679 | 6,495 |     |  |
| 31 | Lithgow                | 309   |     | 61    | 39 | 22    |  |     |       |       |    |     |     |     |     | 370   |       | 370   | 828   |     |  |
| 32 | Mid-Western Regional   | 494   | 5   | 48    | 10 | 16    |  | 22  | 8     | 17    |    | 152 | 62  | 4   | 77  | 773   | 94    | 867   | 2,480 |     |  |
| 33 | Richmond Valley        | 390   |     | 1,068 |    | 1,068 |  |     |       | 17    |    |     | 1   |     |     | 1,476 | 13    | 1,502 | 2,256 | 13  |  |
| 34 | Nambucca (Groundwater) | 314   |     | 42    |    | 26    |  | 16  |       | 77    |    | 54  | 1   |     |     | 488   |       | 488   | 1,453 |     |  |
| 35 | Singleton              | 525   |     | 77    | 77 |       |  |     | 1,048 | 1,048 | 70 | 238 |     |     |     | 864   | 1,118 | 1,982 | 2,624 |     |  |
| 36 | Parkes                 | 178   |     |       |    |       |  |     | 1,920 | 1,920 |    | 144 | 170 |     |     | 618   | 2,092 | 2,882 | 2,248 | 172 |  |
| 37 | Inverell               | 200   |     | 300   |    |       |  | 300 |       |       |    |     | 150 |     |     | 650   |       | 650   | 1,809 |     |  |

Table 8D: 2014-15 Components of commercial, industrial, rural and municipal water supplied

| WATER UTILITY                        |                             | COMMERCIAL      |                         | INDUSTRIAL                     |                 |                        |                                    |                     |                                       |                 |                        | RURAL                              |                         | MUNICIPAL<br>(Institutional, Public Parks and Gardens) |       |   |                            | VOLUME OF WATER SUPPLIED<br>NON-RES<br>(Commercial, Industrial, Rural, Municipal) |                             |   | TOTAL<br>VOLUME of<br>WATER<br>PRODUCED        | RECYCLED  | URBAN<br>STORMWATER             |                  |                    |
|--------------------------------------|-----------------------------|-----------------|-------------------------|--------------------------------|-----------------|------------------------|------------------------------------|---------------------|---------------------------------------|-----------------|------------------------|------------------------------------|-------------------------|--|-------|---|----------------------------|---|-----------------------------|---|--|---|---------------------------------|------------------|--------------------|
|                                      |                             | Potable<br>(ML) | Non-<br>potable<br>(ML) | Potable<br>(ML)                |                 |                        |                                    | Non-potable<br>(ML) |                                       |                 |                        | Potable<br>(ML)                    | Non-<br>potable<br>(ML) | Potable<br>(ML)  |       | Non-potable<br>(ML)                     |                            | Potable<br>(ML)   | Non-potable<br>(ML)         | Volume<br>Supplied<br>(ML)                              | Potable<br>(ML)                                | Commercial,<br>Industrial,<br>Municipal<br>(ML) | Total Volume<br>Used<br>(ML)    |                  |                    |
|                                      |                             | (55)            | (63a)                   | Total<br>Industrial<br>Potable | Mining<br>(56a) | Manufacturing<br>(56b) | Electricity<br>Generation<br>(56c) | Other<br>(56d)      | Total<br>Industrial<br>Non<br>Potable | Mining<br>(63b) | Manufacturing<br>(63c) | Electricity<br>Generation<br>(63d) | Other<br>(63e)          | (57)   | (63f) | Excluding<br>Parks &<br>Gardens<br>(58) | Parks &<br>Gardens<br>(60) | Excluding<br>Parks &<br>Gardens<br>(63g)  | Parks &<br>Gardens<br>(63h) | W9.1<br><br>Sum(55), (56a<br>to d), (57), (58),<br>(60) | W9.2<br><br>Sum (63a to h)<br>+ (151)<br>(63i) | W9<br>=W9.1+W9.2+W21                            | W11.3<br>=W11.1+W14.1 -<br>W5.1 | W21<br><br>(151) | W28.4<br><br>(63j) |
| 38                                   | Moree Plains (Groundwater)  | 305             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 38                      |  |       | 63                                      |                            | 13  | 406                         | 335   | 1,063  | 2,987   | 322                             |                  |                    |
| 39                                   | Cowra                       | 638             |                         | 175                            |                 | 175                    |                                    |                     |                                       |                 |                        |                                    |                         |  |       | 18                                      | 41                         |   |                             | 872   |  | 872   | 2,762                           |                  |                    |
| 40                                   | Central Tablelands (NO SGE) | 208             |                         | 193                            | 4               | 175                    |                                    | 14                  |                                       |                 |                        |                                    | 301                     |  | 43    | 18                                      |                            |   | 763                         |   | 763  | 1,853   |                                 |                  |                    |
| 41                                   | Muswellbrook                | 338             |                         | 23                             | 21              |                        |                                    | 2                   |                                       |                 |                        |                                    |                         |  | 134   | 77                                      |                            |   | 572                         | 892   | 2,356  | 2,097   | 892                             |                  |                    |
| 42                                   | Corowa                      | 289             |                         | 998                            |                 | 640                    |                                    | 358                 |                                       |                 |                        |                                    | 2                       |  | 17    | 86                                      |                            |   | 1,392                       |   | 1,392  | 3,116   |                                 |                  |                    |
| 43                                   | Tumut                       | 105             | 45                      | 209                            |                 |                        |                                    | 209                 |                                       |                 |                        |                                    | 53                      |  | 29    | 28                                      |                            |   | 424                         | 139   | 657  | 1,430   | 94                              |                  |                    |
| 44                                   | Gunnedah (Groundwater)      | 823             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 55                      |  | 190   | 90                                      |                            |   | 1,158                       |   | 1,158  | 3,104   |                                 |                  |                    |
| 45                                   | Upper Hunter                | 196             |                         | 549                            |                 | 549                    |                                    |                     |                                       |                 |                        |                                    | 5                       |  | 50    | 101                                     |                            |   | 901                         | 125   | 1,151  | 2,575   | 125                             |                  |                    |
| 46                                   | Narrabri (Groundwater)      | 805             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 4     | 12                                      |                            |   | 821                         |   | 821  | 2,608   |                                 |                  |                    |
| 47                                   | Bellingen (Unfiltered)      | 107             |                         | 99                             |                 |                        |                                    | 99                  | 34                                    |                 |                        | 34                                 | 125                     |  | 33    | 36                                      |                            |   | 400                         | 34  | 434  | 1,106   |                                 |                  |                    |
| 48                                   | Leeton                      | 180             |                         | 185                            |                 |                        |                                    | 185                 |                                       |                 |                        |                                    | 64                      |  | 68    | 372                                     |                            |   | 869                         |   | 869  | 2,700   |                                 |                  |                    |
| 49                                   | Young (Reticulator)         | 160             |                         | 110                            |                 |                        |                                    | 110                 |                                       |                 |                        |                                    |                         |  | 65    | 99                                      |                            |   | 434                         | 176   | 786  | 0   | 176                             |                  |                    |
| 50                                   | Cooma-Monaro                | 140             |                         | 55                             |                 |                        |                                    | 55                  |                                       |                 |                        |                                    | 65                      |  | 15    | 15                                      |                            |   | 290                         |   | 290  | 1,533   |                                 |                  |                    |
| 51                                   | Forbes                      | 529             | 10                      |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         | 12   | 98    | 28                                      | 196                        | 74  | 655                         | 292   | 947  | 2,415   |                                 |                  |                    |
| 52                                   | Snowy River (Unfiltered)    | 38              |                         | 27                             |                 |                        |                                    | 27                  |                                       |                 |                        |                                    | 3                       |  | 60    | 1                                       |                            |   | 129                         | 39  | 207  | 611   | 39                              |                  |                    |
| 53                                   | Berrigan (Dual Supply)      | 180             | 94                      |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 22                      |  | 110   | 60                                      |                            | 120   | 372                         | 804   | 1,766  | 1,251   | 590                             | 20               |                    |
| 54                                   | Deniliquin                  | 220             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       | 25                                      |                            |   | 245                         |   | 245  | 1,882   |                                 |                  |                    |
| 55                                   | Warrumbungle                | 205             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   | 205                         |   | 205  | 1,000   |                                 |                  |                    |
| 56                                   | Yass Valley                 | 125             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       | 30                                      |                            |   | 155                         |   | 155  | 848   |                                 |                  |                    |
| Totals for 3,000 - 10,000 Properties |                             | 9,466           | 342                     | 4,219                          | 151             | 2,671                  | 0                                  | 1,397               | 3,010                                 | 2968            | 0                      | 0                                  | 42                      | 1,463  | 150   | 2,227                                   | 1,881                      | 387   | 470                         | 19,256  | 6,782  | 28,461  | 58,927                          | 2,423            | 20                 |
| LWUs with 1,501 - 3,000 Properties   |                             |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   |  |   |                                 |                  |                    |
| 57                                   | Wellington                  | 450             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 28    | 20                                      |                            |   | 498                         |   | 498  | 1,295   |                                 |                  |                    |
| 58                                   | Cootamundra (Reticulator)   | 57              |                         | 29                             |                 |                        |                                    | 29                  |                                       |                 |                        |                                    | 1                       |  | 50    | 8                                       |                            |   | 145                         | 136   | 417  | 0   | 136                             |                  |                    |
| 59                                   | Lachlan                     |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 2,006   |                                 |                  |                    |
| 60                                   | Glen Innes Severn           | 90              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 28    | 1                                       |                            |   | 119                         |   | 119  | 510   |                                 |                  |                    |
| 61                                   | Liverpool Plains            | 75              |                         | 45                             |                 |                        |                                    | 45                  |                                       |                 |                        |                                    | 16                      |  | 24    | 75                                      |                            | 9   | 235                         | 9   | 244  | 911   |                                 |                  |                    |
| 62                                   | Narromine (Groundwater)     | 180             | 11                      |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 5                       |  | 20    | 15                                      |                            | 62  | 220                         | 73  | 293  | 1,219   |                                 |                  |                    |
| 63                                   | Narrandera (Groundwater)    |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 2,177   |                                 |                  |                    |
| 65                                   | Murray (Dual Supply)        | 193             | 133                     | 3                              |                 |                        |                                    | 3                   | 3                                     |                 |                        | 3                                  | 2                       |  | 10    | 1                                       |                            | 68  | 209                         | 204   | 413  | 770   |                                 |                  |                    |
| 66                                   | Cobar WB (NO SGE)           |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 0   |                                 |                  |                    |
| 67                                   | Cobar                       | 76              |                         | 36                             | 24              | 12                     |                                    |                     |                                       |                 |                        |                                    | 20                      |  | 14    | 49                                      |                            |   | 195                         |   | 195  | 948   |                                 |                  |                    |
| 68                                   | Tenterfield                 | 62              |                         | 2                              |                 |                        |                                    | 2                   |                                       |                 |                        |                                    | 2                       |  | 2     | 4                                       |                            |   | 72                          | 44  | 160  | 402   | 44                              |                  |                    |
| 70                                   | Kyogle                      | 45              |                         | 28                             |                 |                        |                                    | 28                  |                                       |                 |                        |                                    | 29                      |  | 22    | 7                                       |                            |   | 131                         | 80  | 291  | 355   | 80                              |                  |                    |
| 71                                   | Palerang                    | 70              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 1                       |  | 1     | 1                                       |                            |   | 73                          | 30  | 133  | 491   | 30                              |                  |                    |
| 73                                   | Upper Lachlan               | 25              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 15    | 30                                      |                            |   | 70                          |   | 70   | 388   |                                 |                  |                    |
| 74                                   | Wentworth (Dual Supply)     |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 414   |                                 |                  |                    |
| 76                                   | Harden (Reticulator)        | 3               |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 387                     |  | 6     | 6                                       |                            |   | 402                         | 34  | 470  | 0   | 34                              |                  |                    |
| 75                                   | Coonamble (Groundwater)     | 50              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 58                      |  | 21    | 100                                     |                            |   | 229                         |   | 229  | 1,239   |                                 |                  |                    |
| 79                                   | Walgett (Dual Supply)       | 875             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   | 875                         |   | 875  | 2,256   |                                 |                  |                    |
| 80                                   | Greater Hume                | 55              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 50                      |  | 4     | 6                                       |                            |   | 115                         | 61  | 237  | 208   | 61                              |                  |                    |
| Totals for 1,500 - 3,000 Properties  |                             | 2,306           | 144                     | 143                            | 24              | 12                     | 0                                  | 107                 | 3                                     | 0               | 0                      | 0                                  | 3                       | 571  | 0     | 245                                     | 323                        | 0   | 139                         | 3,588   | 671  | 4,644   | 15,588                          | 385              | 0                  |



Table 8D: 2014-15 Components of commercial, industrial, rural and municipal water supplied

| WATER UTILITY                        |                               | COMMERCIAL      |                         | INDUSTRIAL                     |                 |                        |                                    |                     |                                       |                 |                        | RURAL                              |                         | MUNICIPAL<br>(Institutional, Public Parks and Gardens) |       |   |                            | VOLUME OF WATER SUPPLIED<br>NON-RES<br>(Commercial, Industrial, Rural, Municipal) |                             |   | TOTAL<br>VOLUME of<br>WATER<br>PRODUCED        | RECYCLED  | URBAN<br>STORMWATER             |                  |                    |
|--------------------------------------|-------------------------------|-----------------|-------------------------|--------------------------------|-----------------|------------------------|------------------------------------|---------------------|---------------------------------------|-----------------|------------------------|------------------------------------|-------------------------|--|-------|---|----------------------------|---|-----------------------------|---|--|---|---------------------------------|------------------|--------------------|
|                                      |                               | Potable<br>(ML) | Non-<br>potable<br>(ML) | Potable<br>(ML)                |                 |                        |                                    | Non-potable<br>(ML) |                                       |                 |                        | Potable<br>(ML)                    | Non-<br>potable<br>(ML) | Potable<br>(ML)  |       | Non-potable<br>(ML)                     |                            | Potable<br>(ML)   | Non-potable<br>(ML)         | Volume<br>Supplied<br>(ML)                              | Potable<br>(ML)                                | Commercial,<br>Industrial,<br>Municipal<br>(ML) | Total Volume<br>Used<br>(ML)    |                  |                    |
|                                      |                               | (55)            | (63a)                   | Total<br>Industrial<br>Potable | Mining<br>(56a) | Manufacturing<br>(56b) | Electricity<br>Generation<br>(56c) | Other<br>(56d)      | Total<br>Industrial<br>Non<br>Potable | Mining<br>(63b) | Manufacturing<br>(63c) | Electricity<br>Generation<br>(63d) | Other<br>(63e)          | (57)   | (63f) | Excluding<br>Parks &<br>Gardens<br>(58) | Parks &<br>Gardens<br>(60) | Excluding<br>Parks &<br>Gardens<br>(63g)  | Parks &<br>Gardens<br>(63h) | W9.1<br><br>Sum(55), (56a<br>to d), (57), (58),<br>(60) | W9.2<br><br>Sum (63a to h)<br>+ (151)<br>(63i) | W9<br>=W9.1+W9.2+W21                            | W11.3<br>=W11.1+W14.1 -<br>W5.1 | W21<br><br>(151) | W28.4<br><br>(63j) |
| LWUs with 200 - 1,500 Properties     |                               |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   |  |   |                                 |                  |                    |
| 81                                   | Gwydir                        | 72              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 11                      |  | 44    | 165                                     |                            |   | 292                         | 20  | 332  | 796   | 20                              |                  |                    |
| 83                                   | Oberon (Reticulator)          | 25              |                         |                                |                 |                        | 120                                |                     |                                       |                 |                        |                                    | 4                       |  | 15    | 21                                      |                            |   | 450                         |   | 450  | 704   |                                 |                  |                    |
| 84                                   | Gilgandra (Groundwater)       | 179             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 10    | 12                                      |                            |   | 207                         |   | 207  | 925   |                                 |                  |                    |
| 85                                   | Uralla                        | 33              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 1     | 15                                      |                            |   | 49                          |   | 49   | 320   |                                 |                  |                    |
| 86                                   | Hay (Dual Supply)             |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   | 50                         |   |                             | 50  | 50   | 374   |                                 |                  |                    |
| 87                                   | Bourke (Dual Supply)          | 7               | 150                     |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         | 20   |       |   |                            | 100   | 7                           | 270   | 277  | 373   |                                 |                  |                    |
| 88                                   | Wakool (Dual Supply)          | 118             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 44                      |  |       | 8                                       |                            |   | 170                         |   | 170  | 261   |                                 |                  |                    |
| 89                                   | Bogan                         | 175             |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         | 4  | 2     | 26                                      |                            | 26  | 203                         | 30  | 233  | 693   |                                 |                  |                    |
| 90                                   | Guyra                         | 21              |                         |                                |                 |                        | 169                                |                     |                                       |                 |                        |                                    |                         |  |       | 7                                       |                            |   | 197                         |   | 197  | 395   |                                 |                  |                    |
| 91                                   | Cabonne                       | 19              | 10                      |                                |                 |                        | 5                                  |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   | 24                          | 10  | 34   | 208   |                                 |                  |                    |
| 92                                   | Carrathool (Groundwater)      | 46              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         | 478  |       | 2                                       |                            | 2   | 48                          | 480   | 528  | 476   |                                 |                  |                    |
| 93                                   | Tumbarumba                    | 40              |                         |                                |                 |                        | 7                                  |                     |                                       |                 |                        |                                    |                         |  | 25    | 2                                       |                            |   | 74                          |   | 74   | 275   |                                 |                  |                    |
| 94                                   | Gundagai                      |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 600   |                                 |                  |                    |
| 96                                   | Warren (Dual Supply)          | 35              | 46                      |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   | 50                         |   | 35                          | 96  | 131  | 379   |                                 |                  |                    |
| 97                                   | Bombala                       | 7               |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 7     | 1                                       |                            |   | 15                          | 20  | 55   | 172   | 20                              |                  |                    |
| 98                                   | Walcha                        | 36              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    | 3                       | 3  | 10    | 7                                       |                            |   | 56                          | 3   | 59   | 172   |                                 |                  |                    |
| 100                                  | Balranald (Dual Supply)       | 44              | 77                      |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            | 132   | 44                          | 209   | 253  | 190   |                                 |                  |                    |
| 101                                  | Murrumbidgee (Groundwater)    |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 794   |                                 |                  |                    |
| 103                                  | Central Darling (Dual Supply) |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   | 0  | 121   |                                 |                  |                    |
| 104                                  | Boorowa                       | 21              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 10    | 56                                      |                            |   | 87                          |   | 87   | 214   |                                 |                  |                    |
| 105                                  | Brewarrina (Dual Supply)      | 30              | 250                     |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            | 371   | 30                          | 621   | 651  | 314   |                                 |                  |                    |
| 106                                  | Jerilderie (Dual Supply)      | 25              |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  | 1     |   |                            | 3   | 26                          | 53  | 129  | 118   | 50                              |                  |                    |
| Totals for 200 - 1,500 Properties    |                               | 933             | 533                     | 572                            | 0               | 283                    | 0                                  | 289                 | 0                                     | 0               | 0                      | 0                                  | 62                      | 505  | 125   | 322                                     | 0                          | 734   | 2,014                       | 1,862   | 3,966  | 8,873   | 90                              | 0                |                    |
| LWUs without Water Supply            |                               |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   |  |   |                                 |                  |                    |
| 9                                    | Wagga Wagga (NO WS)           |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 249   |  |   | 249                             |                  |                    |
| 30A                                  | Hawkesbury                    |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 18  |  |   | 18                              |                  |                    |
| 69                                   | Temora                        |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 99  |  |   | 99                              |                  |                    |
| 72                                   | Bland                         |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 262   |  |   | 262                             |                  |                    |
| 77                                   | Junee                         |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 147   |  |   | 147                             |                  |                    |
| 78                                   | Blayney                       |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 211   |  |   | 211                             |                  |                    |
| 95                                   | Weddin                        |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 12  |  |   | 12                              |                  |                    |
| 99                                   | Coolamon                      |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   |  |   |                                 |                  |                    |
| 102                                  | Lockhart                      |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 2   |  |   | 2                               |                  |                    |
| 107                                  | Urana                         |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             |   |  |   |                                 |                  |                    |
| Totals for LWUs without water supply |                               |                 |                         |                                |                 |                        |                                    |                     |                                       |                 |                        |                                    |                         |  |       |   |                            |   |                             | 1,000   |  |   | 1,000                           |                  |                    |
| Totals for all LWUs                  |                               | 39,000          | 1,350                   | 14,300                         | 1,540           | 7,330                  | 20                                 | 5,310               | 7,300                                 | 3,300           | 1,900                  | 1,020                              | 1,050                   | 8,100  | 1,120 | 8,400                                   | 6,100                      | 740   | 2,050                       | 76,000  | 24,100   | 100,000   | 255,000                         | 11,600           | 44                 |

Table 9: Water supply - utility characteristics

| WATER UTILITY                 |   | ASSESSMENTS - CONNECTIONS - POPULATION |         |         |                            |  |  |                                    |   |   |   |         |             |                         | ASSETS    |           |                                      |                     |                                  |                       |           |           |                  |                                  | WORKFORCE   |         |                      |                  |                       |              |          |           |       |                      |         |           |          |
|-------------------------------|---|--|---------|---------|----------------------------|--|--|------------------------------------|---|---|---|---------|-------------|-------------------------|-----------|-----------|--------------------------------------|---------------------|----------------------------------|-----------------------|-----------|-----------|------------------|----------------------------------|---|---------|----------------------|------------------|-----------------------|--------------|----------|-----------|-------|----------------------|---------|-----------|----------|
|                               |   | Total No of Assessments                |         |         | No. of Service Connections | Connected Properties - Total                               |  | Connected Properties - Residential |   |   | New Residential Dwellings Connected             |         |             | Population              |           |           | Headworks Transfer Mains (raw water) | Trunk + Retic Mains | Properties Served per km of Main | Water Treatment Works | Dams      | Bores     | Pumping Stations | Pumping Stations / 100km of Main | Capital Expenditure (Assets, Renewals, Plant/Equip) |         | Capital Works Grants | Total Work Force | % Undergoing Training | Out-sourcing | Injuries | Days Lost |       |                      |         |           |          |
|                               |   |  |         |         |                            |  |  |                                    |   |   |   |         |             |                         |           |           |                                      |                     |                                  |                       |           |           |                  |                                  |   |         |                      |                  |                       |              |          |           |       |                      |         |           |          |
|                               |   |  |         |         |                            | (Single + Multi + Non-res Dwellings + Fire) To Calc Losses | (Ratio of Connected Properties to Assessments) | Connected Properties (18) x (19)   | (Ratio of Res Assessments to Total Assessments) | (Ratio of Res Connected Props to Res Assessments) | Connected Residential Properties (18)x(21)x(22) | (%)     | (Permanent) | (Peak) (% of Permanent) | (km)      | (km)      |                                      |                     |                                  | (20) / (25a)          |           |           |                  | (Providing Full Treatment) (No.) |   |         |                      |                  |                       | (No.)        |          | (No.)     | (No.) | (30) / [(25a) / 100] | \$/prop | Total \$M | (\$'000) |
|                               |   | (18)                                   | (18a)   | (19)    | (20) C4                    | (21)   | (22)   | (22a) C2                           | (22b)   | (23) C1   | (24)  | (25)    | (25a) A2    | (26) A3                 | (27) A1   | (28)      | (29)                                 | (30)                | (30a)                            | (31) F28              | (31a) F14 | (31b) F26 | (32)             | (34)                             | (37)  | (38)    | (39)                 | (40a)            | (40b)                 |              |          |           |       |                      |         |           |          |
| 2012/13                       | 2013/14                                   | 2014/15                                | 2014/15 | 2014/15 | 2014/15                    | 2014/15  | 2012/13  | 2013/14                            | 2014/15   | 2012/13   | 2013/14   | 2014/15 | 2014/15     | 2014/15                 | 2014/15   | 2014/15   | 2014/15                              | 2014/15             | 2014/15                          | 2014/15               | 2014/15   | 2014/15   | 2014/15          | 2014/15                          | 2014/15   | 2014/15 | 2014/15              | 2014/15          | 2014/15               | 2014/15      | 2014/15  |           |       |                      |         |           |          |
|                               | Sydney Water                              |  |         |         |                            | 1,876,000  |  |                                    |   | 1,752,000   |   |         |             | 4,657,000               | 4,755,000 | 4,833,000 |                                      |                     | 22,293                           | 84                    | 9         |           |                  | 80                               | 150   | 0       |                      |                  |                       |              |          |           |       |                      |         |           |          |
|                               | Hunter Water                              |  |         |         |                            | 238,800  |  |                                    |   | 224,800   |   |         |             | 545,000                 | 550,000   | 558,000   |                                      |                     | 4,945                            | 48                    | 6         |           |                  | 154                              | 37  | 219     |                      |                  |                       |              |          |           |       |                      |         |           |          |
|                               | Water NSW                                 |  |         |         |                            |  |  |                                    |   |   |   |         |             |                         |           |           |                                      |                     |                                  |                       |           |           |                  | 14                               |   |         |                      |                  |                       |              |          |           |       |                      |         |           |          |
| LWUs with > 10,000 Properties |   |  |         |         |                            |  |  |                                    |   |   |   |         |             |                         |           |           |                                      |                     |                                  |                       |           |           |                  |                                  |   |         |                      |                  |                       |              |          |           |       |                      |         |           |          |
| 1                             | Gosford                                   | 67,460                                 | 67,730  | 67,830  | 60,520                     | 1.06   | 71,830   | 0.95                               | 1.06  | 68,357  | 0.2   | 0.2     | 0.3         | 163,200                 | 165,200   | 166,300   |                                      |                     | 48                               | 987                   | 73        | 2         | 2                | 22                               | 24  | 2       | 94                   | 6.8              | 101                   | 1.2          | 59       | 5         | 2     | 5                    | 5       | 0         |          |
| 2                             | Wyong                                     | 62,550                                 | 63,370  | 65,500  | 57,990                     | 0.97   | 63,490   | 0.95                               | 0.97  | 60,727  | 1.2   | 0.3     | 1.2         | 149,900                 | 153,700   | 156,000   | 160                                  |                     | 1,218                            | 52                    | 1         | 1         | 12               | 24                               | 2   | 250     | 15.8                 | 61               | 0.9                   | 100          | 0        | 1         | 6     | 0                    | 0       |           |          |
| 3                             | Shoalhaven                                | 50,660                                 | 51,070  | 51,260  | 47,400                     | 0.92   | 47,150   | 0.92                               | 0.93  | 44,021  | 0.9   | 1.2     | 1.5         | 90,000                  | 89,400    | 89,100    | 380                                  | 35                  | 1,510                            | 31                    | 4         | 4         |                  | 26                               | 2   | 218     | 10.3                 | 0                | 1.4                   | 100          | 0        | 4         | 3     | 64                   | 0       |           |          |
| 4                             | Rous (Bulk Supplier) (NO SGE)             | 42,140                                 | 42,650  | 42,940  |                            | 0.96   | 41,230   | 0.88                               | 0.96  | 36,395  |   | 0.0     | 0.0         | 113,100                 | 105,700   | 107,100   |                                      | 26                  | 441                              |                       | 2         | 2         | 3                | 4                                |   | 12.1    | 0                    |                  | 101                   | 0            | 0        | 2         | 0     | 0                    |         |           |          |
| 5                             | MidCoast                                  | 40,090                                 | 40,170  | 40,330  | 36,260                     | 0.96   | 38,710   | 0.93                               | 0.96  | 36,027  | 0.7   | 0.9     | 0.9         | 81,700                  | 82,500    | 82,800    | 120                                  | 21                  | 1,395                            | 28                    | 5         | 2         | 15               | 27                               | 2   | 80      | 3.1                  | 0                | 1.4                   | 100          |          | 3         | 3     | 75                   | 1       |           |          |
| 6                             | Tweed                                     | 34,680                                 | 34,990  | 35,430  | 25,260                     | 0.91   | 32,240   | 0.95                               | 0.93  | 31,188  | 0.5   | 0.8     | 1.6         | 79,200                  | 78,400    | 79,000    | 130                                  | 3                   | 716                              | 45                    | 3         | 1         |                  | 27                               | 4   | 61      | 2.0                  | 4                | 2.0                   | 82           | 11       | 2         | 4     | 35                   | 0       |           |          |
| 7                             | Port Macquarie-Hastings (Unfiltered)      | 31,300                                 | 31,680  | 32,020  | 27,810                     | 0.95   | 30,420   | 0.91                               | 0.95  | 27,740  | 1.1   | 1.3     | 1.7         | 80,200                  | 80,500    | 80,800    | 130                                  |                     | 810                              | 38                    | 4         | 2         | 1                | 19                               | 2   | 325     | 9.9                  | 0                | 1.1                   | 78           | 0        | 2         | 0     | 0                    | 0       |           |          |
| 8                             | Riverina (Groundwater) (NO SGE)           | 30,570                                 | 30,780  | 31,120  | 29,970                     | 0.96   | 29,870   | 0.92                               | 0.96  | 27,352  | 0.8   | 1.2     | 1.0         | 70,200                  | 70,700    | 71,600    | 110                                  | 60                  | 1,660                            | 18                    | 17        | 3         | 28               | 37                               | 2   | 397     | 11.9                 | 0                | 3.2                   | 82           | 0        | 5         | 3     | 12                   | 0       |           |          |
| 10                            | Coffs Harbour                             | 26,330                                 | 26,480  | 26,660  | 24,310                     | 0.94   | 25,060   | 0.94                               | 0.94  | 23,455  | 1.1   | 1.3     | 1.6         | 69,200                  | 70,200    | 71,300    | 120                                  | 14                  | 621                              | 40                    | 2         | 2         |                  | 7                                | 1   | 53      | 1.3                  | 0                | 1.9                   | 71           | 0        | 5         | 3     | 30                   | 0       |           |          |
| 11                            | Albury City                               | 22,590                                 | 22,910  | 24,960  | 22,360                     | 1.03   | 25,700   | 0.92                               | 1.03  | 23,643  | 1.0   | 1.7     | 1.7         | 49,400                  | 49,700    | 50,900    | 110                                  | 7                   | 599                              | 43                    | 1         |           |                  | 21                               | 4   | 88      | 2.3                  | 0                | 0.7                   | 60           | 91       | 2         | 2     | 75                   | 2       |           |          |
| 12                            | Fish River WS (Unfiltered, Bulk Supplier) | 25,000                                 | 25,000  | 25,000  |                            | 0.94   | 23,500   | 0.88                               | 0.94  | 20,680  |   | 0.1     | 0.0         | 62,000                  | 62,000    | 62,000    |                                      | 10                  | 241                              |                       | 1         | 1         |                  | 3                                |   | 0.0     | 0                    |                  | 100                   | 7            | 0        | 2         | 0     | 0                    |         |           |          |
| 13                            | Tamworth Regional                         | 21,240                                 | 21,420  | 21,680  | 21,680                     | 1.00   | 21,680   | 0.91                               | 1.00  | 19,653  | 1.5   | 2.3     | 2.0         | 44,000                  | 44,600    | 45,300    | 180                                  | 114                 | 640                              | 34                    | 5         | 2         | 14               | 21                               | 3   | 305     | 6.6                  | 602              | 2.0                   | 77           | 0        | 4         | 2     | 8                    | 0       |           |          |
| 14                            | Clarence Valley                           | 21,790                                 | 21,840  | 21,890  | 20,900                     | 0.98   | 21,460   | 0.88                               | 0.98  | 18,966  | 0.6   | 0.6     | 0.5         | 45,700                  | 45,700    | 45,700    | 130                                  | 104                 | 1,123                            | 19                    | 0         | 1         |                  | 19                               | 2   | 90      | 1.9                  | 0                | 1.4                   | 66           | 0        | 10        | 0     | 13                   | 0       |           |          |
| 15                            | Eurobodalla                               | 20,700                                 | 20,820  | 20,830  | 18,970                     | 0.94   | 19,580   | 0.95                               | 0.94  | 18,594  | 0.7   | 0.9     | 0.9         | 31,300                  | 31,200    | 31,400    | 320                                  | 36                  | 884                              | 22                    | 2         | 1         | 5                | 14                               | 2   | 131     | 2.6                  | 49               | 1.5                   | 100          | 0        | 9         | 5     | 33                   | 0       |           |          |
| 16                            | Wingecarribee                             | 19,720                                 | 19,960  | 20,150  | 17,860                     | 0.95   | 19,150   | 0.90                               | 0.96  | 17,398  | 0.6   | 1.5     | 1.4         | 39,600                  | 40,200    | 40,600    | 120                                  | 7                   | 661                              | 29                    | 2         | 2         |                  | 15                               | 2   | 146     | 2.8                  | 0                | 1.1                   | 78           | 46       | 3         | 4     | 14                   | 0       |           |          |
| 17                            | Queanbeyan (Reticulator)                  | 15,810                                 | 15,930  | 16,850  | 12,630                     | 1.03   | 17,350   | 0.94                               | 1.04  | 16,417  | 1.4   | 7.9     | 1.7         | 38,100                  | 38,500    | 39,200    | 110                                  |                     | 300                              | 58                    | 0         |           |                  | 4                                | 1   | 52      | 0.9                  | 0                | 0.6                   | 100          | 5        | 2         | 0     | 5                    | 0       |           |          |
| 18                            | Dubbo                                     | 15,260                                 | 15,450  | 15,850  | 15,540                     | 1.11   | 17,590   | 0.88                               | 1.11  | 15,538  | 0.7   | 1.1     | 2.3         | 34,500                  | 34,800    | 35,200    | 110                                  | 8                   | 508                              | 35                    | 1         |           | 7                | 9                                | 2   | 123     | 2.2                  | 0                | 0.6                   | 73           | 0        | 1         | 4     | 1                    | 0       |           |          |
| 19                            | Orange                                    | 16,930                                 | 17,190  | 17,520  | 18,150                     | 1.00   | 17,520   | 0.91                               | 1.00  | 16,011  | 1.7   | 1.7     | 1.4         | 40,100                  | 40,900    | 41,400    | 100                                  | 3                   | 634                              | 28                    | 1         | 3         | 6                | 8                                | 1   | 1,055   | 18.5                 | 9,130            | 1.1                   | 100          |          | 0         | 0     | 0                    | 0       |           |          |
| 20                            | Goulburn Mulwaree                         | 9,640                                  | 10,080  | 10,860  | 10,030                     | 1.03   | 11,190   | 0.90                               | 1.03  | 10,107  | 1.5   | 3.0     | 0.9         | 22,500                  | 22,500    | 22,500    | 100                                  | 94                  | 282                              | 40                    | 2         | 2         |                  | 9                                | 3   | 551     | 6.2                  | 1,150            | 1.5                   | 100          | 21       | 1         | 3     | 3                    | 0       |           |          |
| 21                            | Bathurst Regional                         | 14,500                                 | 14,830  | 14,970  | 13,720                     | 1.05   | 15,720   | 0.90                               | 1.07  | 14,393  | 1.5   | 1.3     | 1.1         | 33,600                  | 34,000    | 34,300    | 170                                  | 15                  | 395                              | 40                    | 1         | 2         | 2                | 11                               | 3   | 473     | 7.4                  | 0                | 1.4                   | 32           | 4        | 1         | 0     | 0                    | 0       |           |          |
| 22                            | Lismore (Reticulator)                     | 13,560                                 | 13,620  | 13,640  | 13,410                     | 1.05   | 14,320   | 0.88                               | 1.06  | 12,675  | 0.9   | 0.4     | 0.4         | 30,700                  | 30,800    | 31,600    | 100                                  |                     | 343                              | 42                    | 0         | 1         |                  | 5                                | 1   | 87      | 1.2                  | 0                | 1.1                   | 100          | 5        | 1         | 2     | 68                   | 2       |           |          |
| 23                            | Bega Valley (Unfiltered)                  | 14,630                                 | 14,680  | 14,650  | 11,730                     | 0.98   | 14,360   | 0.92                               | 0.98  | 13,190  | 0.6   | 0.9     | 0.8         | 24,200                  | 24,400    | 24,600    | 160                                  | 114                 | 615                              | 23                    | 0         | 3         | 11               | 20                               | 3   | 284     | 4.1                  | 0                | 1.6                   | 100          | 0        | 0         | 3     | 14                   | 0       |           |          |
| 24                            | Ballina (Reticulator)                     | 15,030                                 | 15,250  | 15,440  | 12,800                     | 0.93   | 14,360   | 0.90                               | 0.93  | 12,936  | 1.1   | 1.2     | 1.6         | 37,100                  | 37,500    | 37,800    | 130                                  | 0                   | 333                              | 43                    | 1         | 1         | 2                | 4                                | 1   | 215     | 3.1                  | 0                | 0.7                   | 100          | 37       | 0         | 4     | 0                    | 0       |           |          |
| 25                            | Kempsey (Groundwater)                     | 12,130                                 | 11,990  | 12,030  | 11,590                     | 1.04   | 12,510   | 0.88                               | 1.03  | 10,962  | 0.4   | 0.7     | 0.8         | 25,300                  | 25,000    | 26,800    | 140                                  | 224                 | 491                              | 25                    | 4         | 1         | 37               | 22                               | 4   | 428     | 5.                   |                  |                       |              |          |           |       |                      |         |           |          |



Table 9: Water supply - utility characteristics

| WATER UTILITY  |                             | ASSESSMENTS - CONNECTIONS - POPULATION |         |         |                            |                              |         |                                    |         |         |                                     |         |          |            |         | ASSETS  |           |                                      |                     |                                  |                       |           |           |                  |                                  | WORKFORCE   |         |                      |                  |                       |              |          |           |         |   |  |  |
|--|-----------------------------|--|---------|---------|----------------------------|------------------------------|---------|------------------------------------|---------|---------|-------------------------------------|---------|----------|------------|---------|---------|-----------|--------------------------------------|---------------------|----------------------------------|-----------------------|-----------|-----------|------------------|----------------------------------|---|---------|----------------------|------------------|-----------------------|--------------|----------|-----------|---------|---|--|--|
|  |                             | Total No of Assessments                |         |         | No. of Service Connections | Connected Properties - Total |         | Connected Properties - Residential |         |         | New Residential Dwellings Connected |         |          | Population |         |         |           | Headworks Transfer Mains (raw water) | Trunk + Retic Mains | Properties Served per km of Main | Water Treatment Works | Dams      | Bores     | Pumping Stations | Pumping Stations / 100km of Main | Capital Expenditure (Assets, Renewals, Plant/Equip) |         | Capital Works Grants | Total Work Force | % Undergoing Training | Out-sourcing | Injuries | Days Lost |         |   |  |  |
|  |                             |  |         |         |                            |                              |         |                                    |         |         |                                     |         |          |            |         |         |           |                                      |                     |                                  |                       |           |           |                  |                                  |   |         |                      |                  |                       |              |          |           |         |   |  |  |
|  |                             | (18)                                   | (18a)   | (19)    | (20) C4                    | (21)                         | (22)    | (22a) C2                           | (22b)   | (23) C1 | (24)                                | (25)    | (25a) A2 | (26) A3    | (27) A1 | (28)    | (29)      | (30)                                 | (30a)               | (31) F28                         | (31a) F14             | (31b) F26 | (32)      | (34)             | (37)                             | (38)  | (39)    | (40a)                | (40b)            |                       |              |          |           |         |   |  |  |
| 2012/13  | 2013/14                     | 2014/15                                | 2014/15 | 2014/15 | 2014/15                    | 2014/15                      | 2012/13 | 2013/14                            | 2014/15 | 2012/13 | 2013/14                             | 2014/15 | 2012/13  | 2013/14    | 2014/15 | 2014/15 | 2014/15   | 2014/15                              | 2014/15             | 2014/15                          | 2014/15               | 2014/15   | 2014/15   | 2014/15          | 2014/15                          | 2014/15   | 2014/15 | 2014/15              | 2014/15          | 2014/15               | 2014/15      | 2014/15  | 2014/15   | 2014/15 |   |  |  |
| 39   | Cowra                       | 5,650                                  | 5,540   | 5,600   | 5,640                      | 0.95                         | 5,320   | 0.80                               | 0.95    | 4,281   | 0.4                                 | 0.7     | 0.7      | 8,600      | 8,600   | 8,600   | 120       | 2                                    | 482                 | 11                               | 2                     |           | 2         | 19               | 4                                | 324   | 1.7     | 201                  | 0.6              | 100                   | 0            | 0        | 2         | 0       | 0 |  |  |
| 40   | Central Tablelands (NO SGE) | 5,710                                  | 5,730   | 5,780   | 5,880                      | 0.95                         | 5,490   | 0.74                               | 0.95    | 4,052   | 0.9                                 | 0.7     | 0.9      | 12,200     | 13,100  | 14,000  | 110       | 24                                   | 561                 | 10                               | 2                     | 1         | 7         | 27               | 5                                | 154   | 0.8     | 0                    | 3.4              | 43                    | 1            | 0        | 1         | 0       | 0 |  |  |
| 41   | Muswellbrook                | 6,090                                  | 6,130   | 6,160   | 6,160                      | 0.94                         | 5,810   | 0.91                               | 0.96    | 5,370   | 2.8                                 | 4.2     | 2.6      | 13,000     | 13,200  | 13,300  |           | 5                                    | 165                 | 35                               | 3                     |           | 3         | 9                | 5                                | 406   | 2.4     | 0                    | 2.1              | 92                    | 24           | 1        | 6         | 6       | 0 |  |  |
| 42   | Corowa                      | 5,770                                  | 5,860   | 5,860   | 5,190                      | 0.93                         | 5,450   | 0.90                               | 0.93    | 4,917   | 1.1                                 | 1.1     | 1.3      | 10,100     | 10,100  | 9,700   | 190       | 2                                    | 177                 | 31                               | 3                     |           | 2         | 8                | 5                                | 254   | 1.4     | 0                    | 1.7              | 100                   | 0            | 1        | 3         | 1       | 0 |  |  |
| 43   | Tumut                       | 4,660                                  | 4,690   | 4,740   | 4,740                      | 0.95                         | 4,500   | 0.88                               | 0.95    | 3,946   | 0.4                                 | 0.7     | 0.8      | 8,600      | 8,600   | 8,600   | 140       | 17                                   | 185                 | 24                               | 4                     | 1         | 3         | 12               | 6                                | 63  | 0.3     | 0                    | 1.3              | 83                    | 0            | 0        | 0         | 0       | 0 |  |  |
| 44   | Gunnedah (Groundwater)      | 4,590                                  | 4,370   | 4,270   | 4,320                      | 1.02                         | 4,350   | 0.91                               | 1.02    | 3,979   | 1.6                                 | 1.2     | 1.0      | 9,900      | 10,000  | 10,100  | 120       | 42                                   | 183                 | 24                               | 0                     |           | 17        | 21               | 11                               | 274   | 1.2     | 0                    | 1.6              | 100                   | 5            | 1        | 4         | 9       | 1 |  |  |
| 45   | Upper Hunter                | 5,060                                  | 4,780   | 4,780   | 4,330                      | 0.92                         | 4,400   | 0.92                               | 0.93    | 4,079   | 1.3                                 | 3.4     | 1.5      | 11,100     | 12,100  | 13,200  | 100       | 1                                    | 175                 | 25                               | 1                     | 1         | 9         | 13               | 7                                | 692   | 3.0     | 0                    | 2.0              | 100                   | 3            | 9        | 5         | 37      | 2 |  |  |
| 46   | Narrabri (Groundwater)      | 4,540                                  | 4,590   | 4,480   | 3,940                      | 0.98                         | 4,390   | 0.88                               | 0.98    | 3,853   | 0.7                                 | 0.7     | 0.4      | 11,800     | 12,200  | 12,100  | 100       |                                      | 152                 | 29                               | 0                     |           | 11        | 12               | 8                                | 261   | 1.1     | 191                  | 2.1              | 100                   | 0            | 6        | 1         | 4       | 0 |  |  |
| 47   | Bellingen (Unfiltered)      | 4,290                                  | 4,300   | 4,300   | 4,410                      | 0.95                         | 4,090   | 0.89                               | 0.95    | 3,655   | 0.6                                 | 0.4     | 0.2      | 9,600      | 9,600   | 9,900   | 100       | 4                                    | 167                 | 24                               | 2                     | 1         | 4         | 6                | 4                                | 130   | 0.5     | 0                    | 1.0              | 100                   | 10           | 0        | 5         | 0       | 0 |  |  |
| 48   | Leeton                      | 4,060                                  | 4,250   | 4,440   | 4,360                      | 0.92                         | 4,080   | 0.87                               | 0.92    | 3,543   | 0.6                                 | 0.6     | 0.8      | 8,900      | 9,000   | 9,000   | 100       | 2                                    | 192                 | 21                               | 3                     | 3         |           | 6                | 3                                | 254   | 1.0     | 0                    | 1.7              | 57                    | 0            | 1        | 7         | 100     | 6 |  |  |
| 49   | Young (Reticulator)         | 4,510                                  | 4,550   | 4,700   | 4,460                      | 1.04                         | 4,880   | 0.85                               | 1.04    | 4,137   | 0.9                                 | 0.8     | 1.0      | 9,500      | 9,600   | 9,600   | 110       |                                      | 150                 | 33                               | 0                     |           |           | 3                | 2                                | 40  | 0.2     | 0                    | 1.0              | 100                   | 10           | 0        | 3         | 0       | 0 |  |  |
| 50   | Cooma-Monaro                | 3,850                                  | 3,860   | 3,860   | 3,900                      | 0.95                         | 3,670   | 0.88                               | 0.95    | 3,215   | 0.3                                 | 0.3     | 0.2      | 7,100      | 7,400   | 7,400   | 130       |                                      | 134                 | 27                               | 1                     |           | 4         | 3                | 2                                | 535   | 2.0     | 1,475                | 2.6              | 100                   | 0            | 1        | 2         | 5       | 0 |  |  |
| 51   | Forbes                      | 3,610                                  | 3,650   | 3,680   | 3,640                      | 1.01                         | 3,720   | 0.90                               | 1.01    | 3,345   | 0.7                                 | 0.4     | 0.6      | 7,900      | 7,900   | 7,900   | 110       | 10                                   | 138                 | 27                               | 1                     |           | 2         | 6                | 4                                | 167   | 0.6     | 0                    | 2.2              | 75                    | 8            | 0        | 3         | 0       | 0 |  |  |
| 52   | Snowy River (Unfiltered)    | 3,610                                  | 3,660   | 3,710   | 2,930                      | 1.43                         | 5,310   | 0.92                               | 1.43    | 4,879   | 0.3                                 | 0.2     | 0.3      | 4,000      | 4,300   | 4,400   | 370       | 2                                    | 128                 | 41                               | 7                     |           | 1         | 19               | 15                               | 198   | 1.1     | 21                   | 1.3              | 72                    | 30           | 0        | 4         | 0       | 0 |  |  |
| 53   | Berrigan (Dual Supply)      | 3,580                                  | 3,590   | 3,620   | 3,280                      | 0.98                         | 3,540   | 0.88                               | 0.98    | 3,112   | 0.8                                 | 1.0     | 1.1      | 6,800      | 6,800   | 6,900   | 110       | 4                                    | 208                 | 17                               | 4                     | 4         |           | 8                | 4                                | 41  | 0.1     | 0                    | 1.6              | 55                    | 0            | 1        | 1         | 5       | 0 |  |  |
| 54   | Deniliquin                  | 3,650                                  | 3,660   | 3,650   | 3,720                      | 0.96                         | 3,500   | 0.88                               | 0.95    | 3,057   | 0.4                                 | 0.2     | 0.1      | 6,600      | 6,600   | 6,600   | 170       | 1                                    | 149                 | 23                               | 1                     |           | 1         | 5                | 3                                | 32  | 0.1     | 0                    | 1.4              | 40                    | 0            | 0        | 1         | 0       | 0 |  |  |
| 55   | Warrumbungle                | 3,350                                  | 3,340   | 3,350   | 3,120                      | 0.99                         | 3,310   | 0.85                               | 0.97    | 2,750   | 0.5                                 | 0.2     | 0.4      | 5,900      | 5,900   | 5,900   | 100       |                                      | 148                 | 22                               | 4                     | 1         | 6         | 8                | 5                                | 164   | 0.5     | 12                   | 3.8              | 100                   | 65           | 0        | 5         | 0       | 0 |  |  |
| 56   | Yass Valley                 | 3,240                                  | 3,290   | 3,320   | 3,160                      | 0.98                         | 3,250   | 0.92                               | 0.98    | 2,976   | 1.2                                 | 1.1     | 1.6      | 6,700      | 6,700   | 6,700   | 110       | 2                                    | 162                 | 20                               | 1                     | 1         | 5         | 8                | 5                                | 0   | 0.0     | 0                    | 1.4              | 67                    | 10           | 0        | 1         | 0       | 0 |  |  |
| Medians (% of LWUs basis) or totals 3,001 to 10,000 Properties |                             | Total 153,000                          |         |         | Total 149,000              |                              |         |                                    |         |         | Total 330,000                       |         |          |            |         |         | Total 316 | Total 6,329                          | Median 26           | Total 56                         | Total 23              | Total 150 | Total 266 | Median 166       | Total 47.2                       | Median 1.7  |         | Median 2.4           |                  |                       |              |          |           |         |   |  |  |
| LWUs with 1,501 - 3,000 Properties                             |                             |  |         |         |                            |                              |         |                                    |         |         |                                     |         |          |            |         |         |           |                                      |                     |                                  |                       |           |           |                  |                                  |   |         |                      |                  |                       |              |          |           |         |   |  |  |
| 57   | Wellington                  | 2,950                                  | 2,970   | 2,970   | 2,840                      | 0.98                         | 2,910   | 0.88                               | 0.98    | 2,576   | 0.3                                 | 0.3     | 0.2      | 6,500      | 6,500   | 6,600   | 130       | 5                                    | 104                 | 28                               | 2                     |           | 2         | 7                | 7                                | 32  | 0.1     | 0                    | 1.7              | 40                    | 3            | 2        | 0         | 0       | 0 |  |  |
| 58   | Cootamundra (Reticulator)   | 3,030                                  | 3,030   | 3,040   | 3,150                      | 0.99                         | 3,010   | 0.89                               | 0.99    | 2,667   | 0.7                                 | 0.6     | 0.4      | 5,600      | 5,600   | 5,600   | 130       |                                      | 70                  | 43                               | 0                     |           |           |                  |                                  | 24  | 0.1     | 0                    | 1.3              | 50                    | 10           | 2        | 4         | 25      | 3 |  |  |
| 59   | Lachlan                     | 2,780                                  | 2,780   | 2,790   | 2,700                      | 1.02                         | 2,840   | 0.76                               | 1.02    | 2,171   | 0.5                                 | 1.0     |          | 5,400      | 5,400   | 5,400   | 110       | 35                                   | 233                 | 12                               | 3                     | 5         | 4         | 16               | 7                                | 913   | 2.6     | 2,094                | 2.8              |                       |              |          |           |         |   |  |  |
| 60   | Glen Innes Severn           | 3,280                                  | 3,280   | 3,390   | 3,230                      | 0.90                         | 3,050   | 0.84                               | 0.91    | 2,597   | 0.5                                 | 0.5     | 0.4      | 6,200      | 6,200   | 6,200   | 120       | 5                                    | 108                 | 28                               | 2                     | 2         | 2         | 3                | 3                                | 481   | 1.5     | 700                  | 1.1              | 100                   | 0            | 0        | 0         | 0       | 0 |  |  |
| 61   | Liverpool Plains            | 2,820                                  | 2,850   | 2,820   | 2,590                      | 0.98                         | 2,760   | 0.95                               | 0.98    | 2,640   | 0.2                                 | 0.7     | 0.4      | 5,900      | 5,900   | 5,900   | 110       | 16                                   | 132                 | 21                               | 1                     | 1         | 12        | 13               | 10                               | 283   | 0.8     | 354                  | 2.2              | 100                   | 0            |          |           |         |   |  |  |
| 62   | Narromine (Groundwater)     | 2,230                                  | 2,230   | 2,240   | 2,280                      | 0.95                         | 2,120   | 0.87                               | 0.95    | 1,858   | 0.2                                 | 0.4     | 0.1      | 4,900      | 5,200   | 5,100   | 130       | 5                                    | 72                  | 29                               | 2                     | 2         | 8         | 3                | 4                                | 137   | 0.3     | 371                  | 1.4              | 100                   | 1            | 1        | 5         | 34      | 5 |  |  |
| 63   | Narrandera (Groundwater)    | 2,260                                  | 2,250   | 2,270   | 2,250                      | 0.92                         | 2,090   | 0.86                               | 0.92    | 1,798   | 0.2                                 | 0.2     |          | 4,800      | 4,800   | 4,500   | 110       | 2                                    | 88                  | 24                               | 0                     |           | 4         | 4                | 5                                | 394   | 0.8     | 0                    | 2.9              | 17                    |              |          |           |         |   |  |  |
| 65   | Murray (Dual Supply)        | 3,070                                  | 3,160   | 3,210   | 2,800                      | 0.95                         | 3,050   | 0.88                               | 0.95    | 2,692   | 1.2                                 | 1.6     | 2.9      | 7,300      | 6,700   | 6,800   | 210       | 7                                    | 167                 | 18                               | 2                     |           | 1         | 9                | 5                                | 155   | 0.5     | 0                    | 1.1              | 100                   | 0            | 0        | 0         | 0       | 0 |  |  |
| 67   | Cobar                       | 2,380                                  | 2,380   | 2,380   | 2,350                      | 0.95                         | 2,260   | 0.85                               | 0.95    | 1,923   | 0.5                                 | 0.4     | 0.5      | 6,000      | 6,000   | 6,000   | 120       | 3                                    | 116                 | 19                               | 1                     |           | 1         | 6                | 5                                | 0   | 0.0     | 0                    | 1.8              |                       |              |          |           |         |   |  |  |
| 66   | Cobar WB                    |  |         |         |                            |                              |         |                                    |         |         |                                     |         |          |            |         |         | 336       |                                      |                     |                                  | 4                     |           | 3         |                  |                                  |   | 0       |                      | 100              | 0                     |              |          | 0         |         |   |  |  |
| 68   | Tenterfield                 | 2,130                                  | 2,120   | 2,090   | 2,080                      | 0.95                         | 1,990   | 0.87                               | 0.95    | 1,737   | 0.6                                 | 1.0     | 0.3      | 3,700      | 3,700   | 3,700   | 100       |                                      | 69                  | 29                               | 2                     | 1         | 1         | 4                | 6                                | 258   | 0.5     | 0                    | 1.5              | 100                   | 0            | 2        | 0         | 20      | 3 |  |  |
| 70   | Kyogle                      | 2,000                                  | 2,010   | 2,020   | 1,980                      | 0.95                         | 1,910   | 0.87                               | 0.95    | 1,666   | 0.2                                 | 1.2     | 1.0      | 3,700      | 3,700   | 3,700   | 120       | 15                                   | 56                  | 34                               | 2                     | 1         | 3         | 5                | 9                                |   |         |                      |                  |                       |              |          |           |         |   |  |  |



Table 9: Water supply - utility characteristics

| WATER UTILITY   | ASSESSMENTS - CONNECTIONS - POPULATION |              |         |                            |   |         |                                    |              |         |                                     |         |          |            |         | ASSETS   |                                      |                     |                                  |                       |   |           |                  |                                  |   |          |                      | WORKFORCE        |                       |              |          |            |         |            |    |  |  |  |  |  |
|---|--|--------------|---------|----------------------------|---|---------|------------------------------------|--------------|---------|-------------------------------------|---------|----------|------------|---------|--|--------------------------------------|---------------------|----------------------------------|-----------------------|---|-----------|------------------|----------------------------------|---|----------|----------------------|------------------|-----------------------|--------------|----------|------------|---------|------------|----|--|--|--|--|--|
|   | Total No of Assessments                |              |         | No. of Service Connections | Connected Properties - Total                |         | Connected Properties - Residential |              |         | New Residential Dwellings Connected |         |          | Population |         |  | Headworks Transfer Mains (raw water) | Trunk + Retic Mains | Properties Served per km of Main | Water Treatment Works | Dams  | Bores     | Pumping Stations | Pumping Stations / 100km of Main | Capital Expenditure (Assets, Renewals, Plant/Equip) |          | Capital Works Grants | Total Work Force | % Undergoing Training | Out-sourcing | Injuries | Days Lost  |         |            |    |  |  |  |  |  |
|   |  |              |         |                            |   |         |                                    |              |         |                                     |         |          |            |         |  |                                      |                     |                                  |                       |   |           |                  |                                  |   |          |                      |                  |                       |              |          |            |         |            |    |  |  |  |  |  |
|   | (18)                                   | (18a)        | (19)    | (20) C4                    | (21)  | (22)    | (22a) C2                           | (22b)        | (23) C1 | (24)                                | (25)    | (25a) A2 | (26) A3    | (27) A1 | (28)   | (29)                                 | (30)                | (30a)                            | (31) F28              | (31a) F14   | (31b) F26 | (32)             | (34)                             | (37)  | (38)     | (39)                 | (40a)            | (40b)                 |              |          |            |         |            |    |  |  |  |  |  |
| 2012/13   | 2013/14                                | 2014/15      | 2014/15 | 2014/15                    | 2014/15                                     | 2014/15 | 2014/15                            | 2014/15      | 2012/13 | 2013/14                             | 2014/15 | 2012/13  | 2013/14    | 2014/15 | 2014/15  | 2014/15                              | 2014/15             | 2014/15                          | 2014/15               | 2014/15   | 2014/15   | 2014/15          | 2014/15                          | 2014/15   | 2014/15  | 2014/15              | 2014/15          | 2014/15               | 2014/15      | 2014/15  | 2014/15    | 2014/15 |            |    |  |  |  |  |  |
| LWUs with 200 - 1,500 Properties                            |  |              |         |                            |   |         |                                    |              |         |                                     |         |          |            |         |  |                                      |                     |                                  |                       |   |           |                  |                                  |   |          |                      |                  |                       |              |          |            |         |            |    |  |  |  |  |  |
| 81  | Gwydir                                 | 1,550        | 1,550   | 1,550                      | 1,690                                       | 0.95    | 1,470                              | 0.87         | 0.95    | 1,276                               | 0.5     | 0.2      | 0.2        | 2,600   | 2,600  | 2,600                                | 130                 | 1                                | 90                    | 16  | 2         | 9                | 1                                | 1   | 0        | 0.0                  | 0                | 2.7                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 83  | Oberon (Reticulator)                   | 1,320        | 1,330   | 1,280                      | 1,280                                       | 1.01    | 1,300                              | 0.84         | 1.02    | 1,098                               | 1.0     | 0.3      | 0.8        | 3,200   | 3,200  | 3,200                                | 130                 | 4                                | 39                    | 33  | 1         |                  |                                  |   | 115      | 0.1                  | 0                | 3.1                   | 75           | 8        | 0          | 0       | 0          |    |  |  |  |  |  |
| 84  | Gilgandra (Groundwater)                | 1,380        | 1,380   | 1,370                      | 1,350                                       | 0.98    | 1,350                              | 0.89         | 0.98    | 1,199                               | 0.2     |          | 0.7        | 2,900   | 2,900  | 3,400                                | 120                 | 10                               | 54                    | 25  | 1         | 5                | 2                                | 4   | 205      | 0.3                  | 0                | 1.7                   | 44           |          | 1          | 19      | 23         |    |  |  |  |  |  |
| 85  | Uralla                                 | 1,410        | 1,420   | 1,440                      | 1,440                                       | 1.01    | 1,450                              | 0.89         | 1.02    | 1,303                               | 0.9     | 0.6      | 0.8        | 2,800   | 2,900  | 2,900                                | 110                 | 0                                | 62                    | 23  | 2         | 1                | 2                                | 3   | 21       | 0.0                  | 0                | 1.7                   | 100          | 7        | 0          | 2       | 0          |    |  |  |  |  |  |
| 86  | Hay (Dual Supply)                      | 1,360        | 1,360   | 1,360                      | 2,430                                       | 0.98    | 1,330                              | 0.88         | 0.98    | 1,176                               | 0.2     | 0.2      | 0.2        | 2,400   | 2,400  | 2,400                                | 100                 | 2                                | 47                    | 28  | 1         |                  | 3                                | 6   | 43       | 0.1                  | 0                | 1.5                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 87  | Bourke (Dual Supply)                   | 1,310        | 1,380   | 1,380                      | 1,180                                       | 1.00    | 1,380                              | 0.83         | 1.00    | 1,144                               | 0.4     | 0.7      | 0.7        | 2,100   | 2,100  | 2,100                                | 130                 | 0                                | 41                    | 34  | 1         | 1                | 2                                | 5   | 0        | 0.0                  | 641              | 2.2                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 88  | Wakool (Dual Supply)                   | 1,550        | 1,580   | 1,530                      | 1,460                                       | 0.95    | 1,450                              | 0.77         | 0.95    | 1,125                               | 0.4     | 0.4      | 0.4        | 2,600   | 2,600  | 2,600                                | 150                 |                                  | 166                   | 9   | 5         | 1                | 8                                | 5   | 259      | 0.4                  | 0                | 4.1                   | 67           | 5        | 0          | 0       | 0          |    |  |  |  |  |  |
| 89  | Bogan                                  | 1,100        | 1,120   | 1,180                      | 1,080                                       | 1.01    | 1,190                              | 0.87         | 1.01    | 1,042                               | 1.1     | 1.4      | 2.7        | 2,500   | 2,600  | 2,600                                | 130                 | 34                               | 58                    | 21  | 1         |                  | 1                                | 2   | 0        | 0.0                  | 0                | 1.7                   |              | 2        |            | 0       |            |    |  |  |  |  |  |
| 90  | Guyra                                  | 1,420        | 1,310   | 1,330                      | 1,360                                       | 0.95    | 1,260                              | 0.90         | 0.95    | 1,140                               | 0.3     | 2.5      | 3.4        | 2,500   | 2,500  | 2,500                                | 100                 | 10                               | 60                    | 21  | 1         | 2                | 1                                | 2   | 39       | 0.0                  | 0                | 2.0                   | 100          | 5        | 0          | 10      | 0          |    |  |  |  |  |  |
| 91  | Cabonne                                | 1,200        | 1,220   | 1,230                      | 1,230                                       | 0.95    | 1,170                              | 0.84         | 0.95    | 987                                 | 0.6     | 0.7      | 0.8        | 1,800   | 1,800  | 1,800                                | 100                 | 58                               | 52                    | 23  | 2         | 3                | 7                                | 4   | 8        | 389                  | 0.5              | 0                     | 6.0          | 100      | 14         | 0       | 2          | 0  |  |  |  |  |  |
| 92  | Carrathool (Groundwater)               | 1,170        | 1,350   | 1,280                      | 1,280                                       | 0.95    | 1,210                              | 0.62         | 0.95    | 756                                 | 0.4     | 0.2      | 0.9        | 2,000   | 2,000  | 2,000                                | 110                 | 10                               | 476                   | 3   | 0         | 3                | 9                                | 21  | 4        | 183                  | 0.2              | 0                     | 5.0          | 100      | 10         |         |            |    |  |  |  |  |  |
| 93  | Tumbarumba                             | 1,230        | 1,230   | 1,230                      | 1,240                                       | 0.95    | 1,170                              | 0.88         | 0.95    | 1,026                               | 3.0     |          | 1.8        | 1,700   | 1,700  | 1,700                                | 130                 | 16                               | 66                    | 18  | 2         | 1                | 2                                | 3   | 591      | 0.7                  | 392              | 1.7                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 94  | Gundagai                               | 1,070        | 1,150   | 1,160                      | 1,160                                       | 0.85    | 990                                | 0.87         | 0.84    | 848                                 | 0.6     | 0.8      |            | 2,400   | 2,400  | 2,400                                | 210                 | 0                                | 36                    | 28  | 1         |                  | 2                                | 6   | 27       | 0.0                  | 0                | 2.0                   |              |          |            |         |            |    |  |  |  |  |  |
| 96  | Warren (Dual Supply)                   | 1,050        | 1,050   | 1,030                      | 970   | 0.91    | 940                                | 0.91         | 0.90    | 851                                 | 0.0     |          | 0.1        | 1,900   | 1,900  | 2,100                                | 110                 | 8                                | 30                    | 31  | 0         | 5                | 2                                | 7   | 215      | 0.2                  | 102              | 2.1                   | 100          | 0        | 0          | 2       | 0          |    |  |  |  |  |  |
| 97  | Bombala                                | 940          | 940     | 940                        | 850   | 0.95    | 890                                | 0.84         | 0.95    | 746                                 | 0.0     |          | 0.1        | 1,900   | 1,900  | 1,900                                | 110                 | 4                                | 39                    | 23  | 2         |                  | 3                                | 8   | 55       | 0.0                  | 0                | 2.2                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 98  | Walcha                                 | 860          | 910     | 910                        | 940   | 1.01    | 920                                | 0.83         | 1.01    | 758                                 | 0.0     |          | 0.4        | 1,700   | 1,700  | 1,700                                | 110                 | 17                               | 57                    | 16  | 1         | 1                | 3                                | 5   | 87       | 0.1                  | 0                | 2.2                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 100   | Balranald (Dual Supply)                | 960          | 960     | 960                        | 840   | 0.95    | 910                                | 0.84         | 0.95    | 761                                 | 0.0     |          | 0.3        | 2,300   | 1,600  | 1,600                                | 160                 | 2                                | 30                    | 30  | 2         |                  | 5                                | 17  | 0        | 0.0                  | 0                | 1.1                   | 100          | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| 101   | Murrumbidgee (Groundwater)             | 770          | 770     | 770                        | 840   | 1.03    | 790                                | 0.88         | 1.03    | 700                                 | 0.4     | 0.1      |            | 1,700   | 1,600  | 1,700                                |                     |                                  | 32                    | 25  | 1         | 4                | 3                                | 9   | 59       | 0.0                  | 0                | 5.1                   |              |          |            |         |            |    |  |  |  |  |  |
| 103   | Central Darling (Dual Supply)          | 740          | 740     | 740                        | 680   | 1.00    | 740                                | 0.72         | 1.00    | 530                                 | 0.9     | 0.4      |            | 1,000   | 1,000  | 1,000                                | 110                 |                                  | 66                    | 11  | 3         | 4                | 3                                | 8   | 12       | 0                    | 0.0              | 0                     | 3.4          | 80       | 0          | 1       | 5          | 2  |  |  |  |  |  |
| 104   | Boorowa                                | 680          | 690     | 700                        | 730   | 0.94    | 650                                | 0.90         | 0.94    | 589                                 | 3.1     | 1.5      | 0.3        | 1,700   | 1,400  | 1,400                                | 460                 | 1                                | 48                    | 14  | 1         | 1                | 2                                | 1   | 2        | 202                  | 0.1              | 0                     | 2.8          | 83       | 10         | 2       | 4          | 18 |  |  |  |  |  |
| 105   | Brewarrina (Dual Supply)               | 600          | 570     | 550                        | 540   | 0.86    | 470                                | 0.88         | 0.86    | 412                                 | 1.1     | 0.9      |            | 1,500   | 1,500  | 1,600                                | 110                 | 7                                | 38                    | 12  | 2         | 1                | 1                                | 2   | 5        | 66                   | 0.0              | 22                    | 4.3          | 100      | 0          | 0       | 0          | 0  |  |  |  |  |  |
| 106   | Jerilderie (Dual Supply)               | 530          | 530     | 530                        | 530   | 0.93    | 490                                | 0.75         | 0.93    | 365                                 | 0.3     |          |            | 800     | 800  | 780                                  | 120                 | 3                                | 43                    | 11  | 1         |                  | 1                                | 2   | 216      | 0.1                  | 15               | 2.0                   |              | 0        | 0          | 0       | 0          |    |  |  |  |  |  |
| Medians (% of LWUs basis) or totals 200 to 1,500 Properties |  | Total 24,450 |         |                            | Total 23,520                                |         |                                    | Total 45,980 |         |                                     |         |          | Total 187  |         | Total 1,630  |                                      | Median 22           |                                  | Total 33              |   | Total 18  |                  | Total 48                         |   | Total 77 |                      | Median 63        |                       | Total 3.0    |          | Median 2.2 |         | Median 0.0 |    |  |  |  |  |  |
| Median All LWUs (% of LWUs basis)                           |  |              |         |                            |   |         |                                    |              |         |                                     |         |          |            |         |  | New res dwellings 0.8 %              |                     |                                  |                       | Properties served per km of main 27                             |           |                  |                                  | Capital Expenditure/prop \$150                      |          |                      |                  | 1.7                   |              |          |            |         |            |    |  |  |  |  |  |
| Median All LWUs (Statewide basis)                           |  |              |         |                            |   |         |                                    |              |         |                                     |         |          |            |         |  | 0.9 %                                |                     |                                  |                       | 32  |           |                  |                                  | \$181   |          |                      |                  | 1.5                   |              |          |            |         |            |    |  |  |  |  |  |
| Totals (excluding bulk suppliers)                           |  |              |         |                            | 871,000 WS assessments                      |         |                                    |              |         | Total WS Population 1.83 M          |         |          |            |         | 163 water treatment works (Note 1)                                   |                                      |                     |                                  |                       | Total WS Capital Expenditure \$206 M (including bulk suppliers) |           |                  |                                  |   |          |                      |                  |                       |              |          |            |         |            |    |  |  |  |  |  |
| 96 LWUs with WS services                                    |  |              |         |                            | 828,000 WS connected properties             |         |                                    |              |         |                                     |         |          |            |         | 104 dams   |                                      |                     |                                  |                       | Total No. of WS employees 1,370                                 |           |                  |                                  |   |          |                      |                  |                       |              |          |            |         |            |    |  |  |  |  |  |
|   |  |              |         |                            | 774,000 WS residential connected properties |         |                                    |              |         |                                     |         |          |            |         | 32,200 km of Transfer, Trunk & Retic mains (includes bulk suppliers) |                                      |                     |                                  |                       |   |           |                  |                                  |   |          |                      |                  |                       |              |          |            |         |            |    |  |  |  |  |  |

Notes: 1. In addition to these 163 water treatment works, the LWUs also have 73 chlorinators/aerators (see Appendix D1 on page 280).

2. Refer also to pages 21, 23 and 27 on employees and employee awareness and training.



Table 10: Water supply - asset management and water resource management

| WATER UTILITY                 |   | ASSET MANAGEMENT  |           |          |   |            |                |  |         |          |                     |         |         |                                   |         |         |                           |                         |                  | WATER RESOURCE MANAGEMENT  |            |                            |   |  |   |                                  |          |   |                                 |            |   |         |                                     |            |   |         |         |         |         |     |     |     |
|-------------------------------|---|---|-----------|----------|---|------------|----------------|--|---------|----------|---------------------|---------|---------|-----------------------------------|---------|---------|---------------------------|-------------------------|------------------|----------------------------|------------|----------------------------|---|--|---|----------------------------------|----------|---|---------------------------------|------------|---|---------|-------------------------------------|------------|---|---------|---------|---------|---------|-----|-----|-----|
|                               |   | Real Losses (Leakage)<br>(see also columns 2 and 3 of Table 8A, column 8 of Table 8 and columns 10, 13, 15 and 16 of Table 10A) |           |          |   |            |                | Non-Revenue Water (NRW) (Potable)                                      |         |          | Main Breaks         |         |         | Unplanned Interruptions to Supply |         |         | Rehabilitations           |                         |                  | Renewals                   |            | Mains Maintenance Cost     | Total Urban Water Supplied  |  |   | Non-Potable Urban Water Supplied |          |   | % Water Recycled (from Table 8) |            | Peak Day to Average Day Water Supplied                                    |         | Peak Week to Average Water Supplied |            | Average Annual Residential Water Supplied |         |         |         |         |     |     |     |
|                               |   |   |           |          |   |            |                |  |         |          |                     |         |         |                                   |         |         |                           |                         |                  |                            |            |                            |   |  |   |                                  |          |   |                                 |            |   |         |                                     |            |   |         |         |         |         |     |     |     |
|                               |   | (L/d per connection)  | (kL/km/d) | (ILI)    | Leakage Test (RDT#, WM#, NF#, Z#, L#, P) (See note 6) |            |                | See W10.1 (Col 9 of Table 8 & Col 15 of Table 8A) (L/d per connection) |         |          | (per 100km of Main) |         |         | (per '000 properties)             |         |         | Mains (% of Total Length) | Service Connections (%) | Water Meters (%) | (\$'000 per 100km of Main) | (% of CRC) | (\$'000 per 100km of Main) | Potable + Non-potable + Recycled (Excluding Bulk Water Exports) (ML) (from Table 8) | For outdoor uses, industry excl agric (Excluding Recycled) (ML) (from Table 8) | (Total Vol Recycled (Urban + Ag Use)/Total Urban Water Supplied (%) | (%)                              | (%)      | From Tables 6 & 8 [(1)+(22a)] Potable (kL/property) |                                 |            | From Tables 6 & 8 [(1)+(11)+(12a)]÷(22a) Potable+Nonpotable (kL/property) |         |                                     |            |   |         |         |         |         |     |     |     |
|                               |   | (41) A10  | (41a) A11 | (41b) A9 | Type & Extent (41c)                                   | Year (41d) | Result % (41e) | (41f)  | (42) A8 | (43) C17 | (44)                | (45)    | (45a)   | (46)                              | (47)    | (48)    | (49) W11                  | (50)                    | (51)             | (52)                       | (53)       | (56a) P2.1                 | (56) W12  | (52)   | (53)  | (56a) P2.1                       | (56) W12 | (52)  | (53)                            | (56a) P2.1 | (56) W12  | (52)    | (53)                                | (56a) P2.1 | (56) W12                                  |         |         |         |         |     |     |     |
| 2012/13                       | 2013/14                                   | 2014/15   | 2014/15   | 2014/15  | 2014/15   | 2014/15    | 2012/13        | 2013/14  | 2014/15 | 2012/13  | 2013/14             | 2014/15 | 2012/13 | 2013/14                           | 2014/15 | 2014/15 | 2014/15                   | 2014/15                 | 2014/15          | 2014/15                    | 2012/13    | 2013/14                    | 2014/15   | 2012/13  | 2013/14   | 2014/15                          | 2012/13  | 2013/14   | 2014/15                         | 2013/14    | 2014/15   | 2013/14 | 2014/15                             | 2012/13    | 2013/14                                   | 2014/15 | 2012/13 | 2013/14 | 2014/15 |     |     |     |
|                               | Sydney Water                              | 87  | 81        | 74       | 4.6   | 1.3        |                |  |         | 29       | 30                  | 26      | 160     | 183                               | 179     |         |                           |                         |                  |                            |            | 523,509                    | 541,492   | 528,825  |   |                                  |          |   |                                 |            |   |         |                                     | 198        | 206                                       | 201     | 198     | 206     | 201     |     |     |     |
|                               | Hunter Water                              | 75  | 82        | 91       | 4.1   | 1.3        |                |  |         | 32       | 30                  | 29      | 236     | 303                               | 267     |         |                           |                         |                  |                            |            | 70,238                     | 73,725  | 69,749   |   |                                  |          |   |                                 |            |   |         |                                     | 176        | 181                                       | 168     | 176     | 181     | 168     |     |     |     |
| LWUs with > 10,000 Properties |   |   |           |          |   |            |                |  |         |          |                     |         |         |                                   |         |         |                           |                         |                  |                            |            |                            |   |  |   |                                  |          |   |                                 |            |   |         |                                     |            |   |         |         |         |         |     |     |     |
| 1                             | Gosford                                   | 30  | 120       | 60       | 3.9   | 1.0        | L1, P1         | 2011   | 58      | 112      | 68                  | 23      | 22      | 17                                | 171     | 187     | 126                       | 0.4                     | -                | 3.4                        | 373        | 0.4                        | 490   | 14,400   | 16,530  | 15,400                           | 123      | 117   | 70                              | 0          | 0   | 158     | 144                                 | 137        | 124                                       | 156     | 161     | 160     | 156     | 161 | 160 |     |
| 2                             | Wyong                                     | 30  | 30        | 30       | 1.6   | 1.0        | Z5             | 2004   | 5       | 72       | 63                  | 65      | 10      | 17                                | 16      | 86      | 70                        | 57                      | 0.1              | 0.9                        | 1.3        | 1015                       | 0.8   | 292  | 14,200  | 14,800                           | 14,400   | 658   | 1                               | 1          | 7   | 5       | 167                                 | 163        | 120                                       | 130     | 155     | 157     | 150     | 166 | 158 | 150 |
| 3                             | Shoalhaven                                | 40  | 60        | 90       | 2.9   | 1.1        | L15            | 2010   | 8       | 68       | 75                  | 109     | 10      | 10                                | 8       | 82      | 65                        | 78                      | 1.2              | 0.7                        | 8.4        | 164                        | 0.4   | 72   | 14,300  | 14,700                           | 14,200   | 2,609   | 2,413                           | 1,926      | 16  | 12      | 260                                 | 245        | 169                                       | 155     | 147     | 147     | 142     | 148 | 148 | 143 |
| 4                             | Rous (Bulk Supplier) (NO SGE)             |   |           |          | 1.4   |            |                |  |         |          |                     |         | 11      | 12                                | 10      | 2       | 1                         | 1                       | 1.1              |                            | 0.5        | 459                        | 0.4   | 169  | 1,370   | 1,480                            | 1,310    |   |                                 |            |   |         |                                     |            |   |         |         |         |         |     |     |     |
| 5                             | MidCoast                                  | 60  | 60        | 60       | 1.6   | 1.0        | NF             | 2015   | 9       | 97       | 92                  | 95      | 8       | 8                                 | 9       | 2       | 2                         | 6                       | 0.4              | -                          | 2.6        | 173                        | 0.4   | 253  | 8,700   | 9,560                            | 9,160    | 133   |                                 |            | 15  | 10      | 166                                 | 154        | 140                                       | 136     | 143     | 150     | 142     | 143 | 150 | 142 |
| 6                             | Tweed                                     | 60  | 60        | 60       | 2.0   | 1.0        | L9, RDT        | 2011   | 6       | 131      | 102                 | 87      | 4       | 8                                 | 4       | 27      | 50                        | 19                      | -                | -                          | 4.1        | 66                         | 0.1   | 125  | 9,090   | 9,770                            | 9,170    | 382   |                                 |            | 6   | 6       | 186                                 | 240        | 129                                       | 152     | 176     | 184     | 178     | 176 | 184 | 178 |
| 7                             | Port Macquarie-Hastings (Unfiltered)      | 40  | 40        | 40       | 1.5   | 1.0        | L6             | 2011   |         | 62       | 57                  | 55      | 3       | 2                                 | 3       | 11      | 10                        | 14                      | 1.0              | 0.0                        | 3.3        | 207                        | 0.3   | 124  | 6,470   | 6,670                            | 6,610    | 300   | 141                             | 195        | 5   | 6       | 209                                 | 167        | 125                                       | 117     | 155     | 157     | 151     | 155 | 157 | 151 |
| 8                             | Riverina (Groundwater) (NO SGE)           | 80  | 80        | 90       | 1.5   | 1.0        | Z4, L3         | 2011   | 6       | 135      | 146                 | 143     | 14      | 19                                | 7       | 55      | 63                        | 57                      | 1.7              | 1.3                        | 3.0        | 345                        | 1.6   | 61   | 15,900  | 15,790                           | 15,600   |   |                                 |            | 239   | 202     | 219                                 | 166        | 330                                       | 324     | 311     | 330     | 324     | 311 |     |     |
| 10                            | Coffs Harbour                             | 70  | 60        | 50       | 2.0   | 1.0        | Z77, L13       | 2010   | 5       | 95       | 67                  | 63      | 10      | 3                                 | 3       | 35      | 9                         | 11                      | 0.3              | 0.1                        | 5.8        | 12                         | 0.0   | 272  | 6,150   | 6,530                            | 6,100    | 265   | 9                               | 9          | 22  | 17      | 147                                 | 179        | 126                                       | 120     | 161     | 169     | 167     | 161 | 169 | 167 |
| 11                            | Albury City                               | 60  | 60        | 50       | 2.0   | 1.0        |                | 2006   |         | 96       | 88                  | 79      | 8       | 10                                | 5       |         |                           |                         | 1.0              | 0.0                        | 2.7        |                            |   | 40   | 7,940   | 7,880                            | 7,630    | 4   | 194                             | 218        | 31  | 31      | 276                                 | 244        | 240                                       | 217     | 250     | 232     | 205     | 250 | 232 | 205 |
| 12                            | Fish River WS (Unfiltered, Bulk Supplier) |   |           |          | 17.7  |            |                |  |         |          |                     |         | 5       | 8                                 | 6       | 1       | 0                         | 0                       | -                |                            | 0.1        |                            |   |  | 7,380   | 6,770                            | 2,700    | 5,905   | 5,000                           | 1,024      |   |         | 186                                 |            | 177                                       |         |         |         |         |     |     |     |
| 13                            | Tamworth Regional                         | 80  | 90        | 70       | 2.3   | 2.6        | Z5, L7         | 2011   | 7       | 124      | 130                 | 99      | 8       | 7                                 | 14      | 1       |                           |                         | 0.6              | 0.1                        | 5.8        | 299                        | 0.5   | 175  | 9,990   | 10,280                           | 7,970    | 195   | 140                             | 140        | 40  | 54      | 215                                 | 155        | 205                                       | 137     | 258     | 287     | 188     | 258 | 287 | 188 |
| 14                            | Clarence Valley                           | 100   | 110       | 110      | 2.1   | 1.1        |                |  |         | 126      | 179                 | 198     | 12      | 13                                | 11      |         |                           |                         | 0.3              | 0.0                        | 8.3        | 79                         | 0.2   | 154  | 5,920   | 6,550                            | 6,280    | 192   | 63                              | 47         | 3   | 3       | 145                                 | 145        | 128                                       | 133     | 155     | 161     | 147     | 155 | 161 | 147 |
| 15                            | Eurobodalla                               | 50  | 50        | 50       | 1.0   | 1.0        | Z59            | 2007   | 8       | 89       | 75                  | 77      | 11      | 13                                | 13      | 57      | 93                        | 120                     | 0.5              | -                          | 11.1       | 243                        | 0.5   | 106  | 3,570   | 3,610                            | 3,520    | 170   |                                 |            | 6   | 7       | 203                                 | 188        | 162                                       | 168     | 116     | 119     | 114     | 116 | 119 | 114 |
| 16                            | Wingecarribee                             | 120   | 130       | 60       | 1.7   | 1.0        | Z10, L12       | 2010   | 9       | 139      | 140                 | 71      | 6       | 12                                | 5       | 53      | 73                        | 14                      | 0.5              | 0.2                        | 11.4       | 155                        | 0.4   | 193  | 5,080   | 5,450                            | 4,540    | 98  |                                 |            | 2   | 4       | 161                                 | 209        | 128                                       | 144     | 184     | 200     | 178     | 184 | 200 | 178 |
| 17                            | Queanbeyan (Reticulator)                  | 120   | 100       | 80       | 3.4   | 1.0        | RDT44          | 2007   |         | 155      | 98                  | 78      | 5       | 2                                 | 6       | 0       | 0                         | 1                       | 0.3              | 0.2                        | 4.6        | 90                         | 0.2   | 272  | 3,830   | 4,000                            | 3,940    |   |                                 |            | 1   | 0       | 219                                 | 176        | 185                                       | 147     | 172     | 178     | 173     | 172 | 178 | 173 |
| 18                            | Dubbo                                     | 100   | 120       | 120      | 3.6   | 2.4        | L44            | 2011   | 8       | 168      | 138                 | 131     | 4       | 4                                 | 5       | 27      | 58                        | 20                      | 0.2              | -                          | 2.7        | 322                        | 0.7   | 216  | 9,600   | 8,920                            | 8,590    | 260   | 269                             | 208        | 22  | 25      | 265                                 | 248        | 237                                       | 214     | 365     | 350     | 327     | 365 | 350 | 327 |
| 19                            | Orange                                    | 60  | 60        | 60       | 1.7   | 1.0        | L98            | 2011   | 9       | 76       | 74                  | 101     | 9       | 9                                 | 7       | 66      | 73                        | 51                      | 0.2              | 0.2                        | 6.3        | 400                        | 0.8   | 73   | 5,860   | 7,140                            | 7,310    | 1,573   |                                 |            | 41  | 39      | 231                                 | 172        | 199                                       | 141     | 178     | 174     | 170     | 178 | 174 | 170 |
| 20                            | Goulburn Mulwaree                         | 70  | 80        | 70       | 2.5   | 1.0        | NF             | 2015   | 10      | 86       | 92                  | 78      | 11      | 11                                | 10      | 276     | 17                        | 3                       | 0.4              | 0.2                        | 12.3       | 865                        | 0.8   | 412  | 2,830   | 3,030                            | 2,750    | 227   | 37                              | 10         | 53  | 66      | 210                                 | 187        | 152                                       | 127     | 159     | 165     | 139     | 159 | 165 | 139 |
| 21                            | Bathurst Regional                         | 80  | 60        | 80       | 2.9   | 1.1        | Z5             | 2007   | 5       | 121      | 95                  | 102     | 5       | 8                                 | 7       | 1       | 2                         | 2                       | 0.3              | 0.2                        | 2.4        | 287                        | 0.4   | 320  | 6,990   | 7,030                            | 7,020    | 1,006   | 1,049                           | 1,074      | 56  | 53      | 254                                 | 240        | 221                                       | 193     | 257     | 227     | 223     | 257 | 227 | 225 |
| 22                            | Lismore (Reticulator)                     | 40  | 40        | 40       | 1.5   | 1.0        |                |  |         | 62       | 61                  | 60      | 25      | 37                                | 20      | 123     | 32                        | 49                      | 0.6              | 0.6                        | 5.9        | 348                        | 0.9   |  | 3,010   | 3,190                            | 3,180    |   |                                 |            | 1   | 0       | 163                                 | 140        |   |         | 151     | 155     | 155     | 151 | 155 | 155 |
| 23                            | Bega Valley (Unfiltered)                  | 140   | 50        | 50       | 0.9   | 1.0        | NF             | 2010   | 7       | 257      | 102                 | 91      | 8       | 9                                 | 6       | 3       | 1                         | 3                       | 0.5              | 1.0                        | 20.4       | 329                        | 0.7   | 165  | 4,460   | 3,770                            | 3,460    | 511   | 66                              | 57         | 17  | 13      |                                     |            | 156                                       | 16      |         |         |         |     |     |     |



Table 10: Water supply - asset management and water resource management

| WATER UTILITY  |                           | ASSET MANAGEMENT  |           |           |                     |  |                |         |  |          |         |                     |         |         |                                   |         |          |                           |                         |                  | WATER RESOURCE MANAGEMENT  |            |                            |   |                            |         |  |                                  |         |   |                                 |         |   |         |                                     |   |   |         |         |         |     |     |     |
|--|---------------------------|---|-----------|-----------|---------------------|--|----------------|---------|--|----------|---------|---------------------|---------|---------|-----------------------------------|---------|----------|---------------------------|-------------------------|------------------|----------------------------|------------|----------------------------|---|----------------------------|---------|--|----------------------------------|---------|---|---------------------------------|---------|---|---------|-------------------------------------|---|---|---------|---------|---------|-----|-----|-----|
|  |                           | Real Losses (Leakage)<br>(see also columns 2 and 3 of Table 8A, column 8 of Table 8 and columns 10, 13, 15 and 16 of Table 10A) |           |           |                     |  |                |         | Non-Revenue Water (NRW) (Potable)                                      |          |         | Main Breaks         |         |         | Unplanned Interruptions to Supply |         |          | Rehabilitations           |                         |                  | Renewals                   |            | Mains Maintenance Cost     |   | Total Urban Water Supplied |         |  | Non-Potable Urban Water Supplied |         |   | % Water Recycled (from Table 8) |         | Peak Day to Average Day Water Supplied              |         | Peak Week to Average Water Supplied |   | Average Annual Residential Water Supplied |         |         |         |     |     |     |
|  |                           | (L/d per connection)  |           | (kL/km/d) | (ILI)               | Leakage Test (RDT#, WM#, NF#, Z#, L#, P) (See note 6)      |                |         | See W10.1 (Col 9 of Table 8 & Col 15 of Table 8A) (L/d per connection) |          |         | (per 100km of Main) |         |         | (per '000 properties)             |         |          | Mains (% of Total Length) | Service Connections (%) | Water Meters (%) | (\$'000 per 100km of Main) | (% of CRC) | (\$'000 per 100km of Main) | Potable + Non-potable + Recycled (Excluding Bulk Water Exports) (ML) (from Table 8) |                            |         | For outdoor uses, industry excl agric (Excluding Recycled) (ML) (from Table 8) |                                  |         | (Total Vol Recycled (Urban + Ag Use)/Total Urban Water Supplied (%) | (%)                             | (%)     | From Tables 6 & 8 [(1)+(22a)] Potable (kL/property) |         |                                     | From Tables 6 & 8 [(1)+(11)+(12a)]÷(22a) Potable+Nonpotable (kL/property) |   |         |         |         |     |     |     |
|  |                           | (41) A10  | (41a) A11 | (41b) A9  | Type & Extent (41c) | Year (41d)   | Result % (41e) | (41f)   | (42) A8  | (43) C17 | (44)    | (45)                | (45a)   | (46)    | (47)                              | (48)    | (49) W11 | (50)                      | (51)                    | (52)             | (53)                       | (56a) P2.1 | (56) W12                   |   |                            |         |  |                                  |         |   |                                 |         |   |         |                                     |   |   |         |         |         |     |     |     |
|  |                           | 2012/13   | 2013/14   | 2014/15   | 2014/15             | 2014/15  | 2014/15        | 2014/15 | 2012/13  | 2013/14  | 2014/15 | 2012/13             | 2013/14 | 2014/15 | 2012/13                           | 2013/14 | 2014/15  | 2014/15                   | 2014/15                 | 2014/15          | 2014/15                    | 2014/15    | 2012/13                    | 2013/14   | 2014/15                    | 2012/13 | 2013/14  | 2014/15                          | 2013/14 | 2014/15   | 2013/14                         | 2014/15 | 2013/14   | 2014/15 | 2012/13                             | 2013/14   | 2014/15                                   | 2012/13 | 2013/14 | 2014/15 |     |     |     |
| 41   | Muswellbrook              | 90  | 60        | 60        | 2.1                 | 1.1  | L12            | 2010    | 6  | 117      | 111     | 99                  | 33      | 33      | 38                                | 2       | 2        | 2                         |                         | 0.4              | 4.3                        | 620        | 1.2                        | 105   | 3,220                      | 3,250   | 2,990  | 943                              |         |   | 28                              | 30      | 287   | 214     |                                     |   | 268                                       | 287     | 245     | 268     | 287 | 245 |     |
| 42   | Corowa                    | 130   | 150       | 120       | 3.5                 | 3.3  | Z57            | 2011    | 5  | 183      | 355     | 156                 | 9       | 7       | 12                                | 168     | 46       | 46                        |                         | 2.3              | 0.1                        | 1.8        | 269                        | 0.8   | 225                        | 4,430   | 3,990  | 3,120                            | 1,000   | 776   |                                 | 4       | 6   | 261     | 212                                 | 227   | 195                                       | 302     | 261     | 287     | 302 | 261 | 287 |
| 43   | Tumut                     | 50  | 70        | 70        | 1.7                 | 1.0  | L67            | 2011    | 8  | 80       | 86      | 87                  | 7       | 13      | 3                                 |         |          |                           |                         | -                | 10.0                       | 31         | 0.1                        | 93  | 1,540                      | 1,550   | 1,570  | 156                              | 35      | 50  | 7                               | 6       | 237   | 133     | 188                                 | 110   | 216                                       | 216     | 219     | 221     | 225 | 220 |     |
| 44   | Gunnedah (Groundwater)    | 70  | 70        | 80        | 1.9                 | 1.0  | L63            | 2010    | 4  | 138      | 146     | 156                 | 5       | 6       | 8                                 |         | 7        | 3                         | 1.1                     | 1.7              | 9.3                        | 129        | 0.4                        | 358   | 2,670                      | 2,970   | 3,100  |                                  |         | 20  | 19                              | 285     | 186   | 248     |                                     | 369   | 400                                       | 427     | 369     | 400     | 427 |     |     |
| 45   | Upper Hunter              | 90  | 90        | 240       | 5.8                 | 3.1  | Z52            | 2009    | 6  | 144      | 148     | 266                 | 24      | 21      | 30                                | 26      | 25       | 27                        | 1.7                     | 2.7              | 31.9                       | 1282       | 2.9                        | 255   | 2,300                      | 2,390   | 2,700  |                                  |         | 0   | 5                               | 100     | 156   |         |                                     | 371   | 400                                       | 306     | 371     | 400     | 306 |     |     |
| 46   | Narrabri (Groundwater)    | 100   | 290       | 200       | 5.3                 | 5.0  | Z18            | 2011    |  | 427      | 295     | 376                 | 115     | 118     | 35                                |         | 4        | 3                         | 2.6                     | 0.5              | -                          | 36         | 0.1                        | 38  | 2,730                      | 2,880   | 2,610  |                                  |         | 17  | 17                              | 165     | 196   | 107     |                                     | 312   | 378                                       | 308     | 312     | 378     | 308 |     |     |
| 47   | Bellingen (Unfiltered)    | 150   | 190       | 70        | 1.8                 | 1.0  | VAD            | 2010    | 10   | 218      | 242     | 100                 | 5       | 5       | 7                                 | 2       | 2        | 2                         | 1.2                     | 0.5              | 5.3                        | 274        | 0.8                        | 56  | 1,310                      | 1,360   | 1,140  | 3                                | 16      | 34  |                                 | 0       | 191   | 168     | 121                                 | 134   | 159                                       | 163     | 152     | 159     | 163 | 152 |     |
| 48   | Leeton                    | 110   | 150       | 150       | 3.5                 | 3.7  | L93            | 2011    | 9  | 180      | 205     | 203                 | 13      | 9       | 10                                | 20      | 14       | 15                        | 0.5                     | 2.5              | 3.7                        | 466        | 1.2                        | 360   | 2,690                      | 2,580   | 2,700  |                                  |         | 1   | 0                               | 249     | 196   | 224     | 168                                 | 487   | 434                                       | 431     | 487     | 434     | 431 |     |     |
| 49   | Young (Reticulator)       | 50  | 50        | 60        | 1.7                 | 1.0  | RDT            | 2011    | 7  | 68       | 59      | 70                  | 13      | 21      | 31                                | 17      | 19       | 41                        | 2.0                     | 1.0              | 9.2                        | 129        | 0.4                        | 187   | 1,200                      | 1,130   | 1,420  | 78                               |         | 10  | 13                              | 214     | 177   | 204     | 147                                 | 177   | 173                                       | 166     | 177     | 173     | 166 |     |     |
| 50   | Cooma-Monaro              | 60  | 50        | 60        | 1.9                 | 1.0  | VAD            | 2014    | 6  | 94       | 90      | 114                 |         | 9       | 7                                 |         | 3        | 3                         | 0.7                     | 1.2              | 4.6                        | 202        | 0.3                        | 10  | 1,300                      | 1,210   | 1,530  |                                  |         | 15  | 0                               | 369     | 185   | 211     | 128                                 | 279   | 250                                       | 339     | 279     | 250     | 339 |     |     |
| 51   | Forbes                    | 100   | 90        | 90        | 2.4                 | 2.4  | NF             | 2015    |  | 202      | 172     | 166                 | 22      | 21      | 20                                | 118     | 106      | 115                       | -                       | 0.5              | 1.0                        |            |                            | 438   | 2,420                      | 2,410   | 2,350  | 224                              | 322     | 292   | 0                               | 0.4     | 295   | 293     | 245                                 | 254   | 382                                       | 359     | 352     | 382     | 359 | 352 |     |
| 52   | Snowy River (Unfiltered)  | 40  | 80        | 70        | 1.6                 | 1.0  | L29, RDT       | 2011    | 12   | 68       | 46      | 38                  | 7       | 21      | 22                                | 15      | 26       | 25                        |                         | 0.7              | 0.9                        | 572        | 1.5                        | 186   | 760                        | 820     | 650  | 27                               | 32      |   | 7                               | 6       | 264   | 316     | 151                                 | 153   | 87  | 93      | 83      | 87      | 93  | 83  |     |
| 53   | Berrigan (Dual Supply)    | 100   | 90        | 100       | 1.5                 | 2.3  | L76            | 2011    | 9  | 104      | 96      | 100                 | 15      | 14      | 17                                | 34      | 14       | 21                        | 0.5                     | 0.8              | 1.7                        | 70         | 0.3                        |   | 1,930                      | 2,550   | 2,550  | 1,174                            | 842     | 704   | 21                              | 23      | 343   | 292     | 223                                 | 217   | 142                                       | 237     | 241     | 441     | 427 | 399 |     |
| 54   | Deniliquin                | 150   | 110       | 110       | 2.8                 | 2.9  | L100           | 2011    | 6  | 163      | 149     | 146                 | 101     | 58      | 69                                | 428     | 14       | 25                        | 0.7                     | -                | 0.6                        | 76         | 0.2                        |   | 2,290                      | 1,930   | 1,880  | 373                              |         | 3   | 3                               | 306     | 333   | 300     | 322                                 | 468   | 476                                       | 474     | 483     | 476     | 474 |     |     |
| 55   | Warrumbungle              | 210   | 230       | 210       | 4.4                 |  |                |         |  | 222      | 227     | 209                 | 34      | 22      | 13                                |         | 1        | 1                         | 0.7                     | 1.0              | 1.0                        | 355        | 0.9                        | 232   | 1,090                      | 1,150   | 1,010  | 4                                | 4       | 10  | 3                               | 6       | 223   | 219     | 178                                 | 151   | 214                                       | 224     | 197     | 215     | 226 | 201 |     |
| 56   | Yass Valley               | 80  | 80        | 90        | 1.8                 | 2.1  | RDT94          | 2011    | 6  | 157      | 173     | 176                 | 5       | 7       | 8                                 | 44      | 50       | 54                        |                         | 0.5              | 3.7                        |            |                            | 25  | 810                        | 880     | 840  |                                  |         |   | 0                               | 249     | 259   | 213     | 142                                 | 165   | 173                                       | 161     | 165     | 173     | 161 |     |     |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                           | 85  |           | 2         | 1                   | Note: ILI < 1.0 is meaningless & has been increased to 1.0 |                |         |  |          | 12      | 12                  | 14      | 26      | 26                                | 22      |          |                           |                         |                  | 169                        |            | 127                        | 2,330   | 2,480                      | 2,560   |  |                                  |         | 8   | 5                               |         |   |         |                                     | 183   | 240                                       | 241     | 201     | 270     | 248 |     |     |
| LWUs with 1,501 - 3,000 Properties                       |                           |   |           |           |                     |  |                |         |  |          |         |                     |         |         |                                   |         |          |                           |                         |                  |                            |            |                            |   |                            |         |  |                                  |         |   |                                 |         |   |         |                                     |   |   |         |         |         |     |     |     |
| 57   | Wellington                | 80  | 80        | 90        | 2.4                 | 1.3  | L91            | 2010    | 7  | 234      | 234     | 234                 | 5       | 5       | 5                                 | 31      | 31       | 14                        |                         | 0.4              | 3.2                        | 89         | 0.3                        | 220   | 960                        | 960     | 1,300  |                                  |         |   | 0.0                             | 267     | 282   | 207     | 141                                 | 196   | 193                                       | 213     | 196     | 193     | 213 |     |     |
| 58   | Cootamundra (Reticulator) | 70  | 70        | 70        | 2.9                 | 1.4  | NF             | 2010    | 8  | 84       | 92      | 106                 | 77      | 46      | 91                                | 8       | 8        | 15                        |                         | 1.4              | 9.5                        |            |                            | 207   | 940                        | 970     | 910  | 202                              |         |   | 46                              | 53      | 187   | 143     |                                     | 136   | 205                                       | 216     | 190     | 205     | 216 | 190 |     |
| 59   | Lachlan                   | 120   | 260       | 140       | 1.6                 |  |                |         |  | 187      | 301     | 205                 | 7       |         |                                   | 9       |          |                           | -                       | -                | -                          | 1112       | 2.5                        | 139   | 1,990                      | 2,000   | 2,030  | 147                              | 31      | 29  | 6                               | 6       | 221   |         | 146                                 |   | 541                                       | 541     | 517     | 554     | 554 | 531 |     |
| 60   | Glen Innes Severn         | 140   | 30        | 30        | 1.0                 | 1.0  | L81, P         | 2010    | 7  | 157      | 52      | 45                  | 2       | 5       | 2                                 | 34      | 34       | 13                        | 0.9                     | 1.8              | 5.7                        | 453        | 1.3                        | 126   | 660                        | 550     | 510  |                                  |         | 16  | 0                               | 271     | 291   | 184     | 146                                 | 133   | 147                                       | 131     | 133     | 147     | 131 |     |     |
| 61   | Liverpool Plains          | 90  | 100       | 100       | 2.0                 | 1.4  | L13            | 2011    | 11   | 127      | 129     | 124                 | 19      | 14      | 23                                | 55      | 48       | 46                        | -                       | 1.6              | 2.4                        | 248        | 0.6                        | 92  | 860                        | 890     | 870  | 8                                | 9       | 9   |                                 | 0       | 293   | 303     | 197                                 | 186   | 189                                       | 193     | 190     | 189     | 193 | 190 |     |
| 62   | Narromine (Groundwater)   | 110   | 100       | 160       | 5.1                 | 3.6  | L79            | 2011    | 6  | 187      | 171     | 205                 | 15      | 20      | 19                                |         |          |                           | 1.4                     | 3.4              | 6.3                        | 368        | 1.5                        | 218   | 1,570                      | 1,410   | 1,290  | 11                               | 95      | 73  | 1                               | 0       | 316   | 329     |                                     |   | 712                                       | 493     | 452     | 716     | 493 | 452 |     |
| 63   | Narrandera (Groundwater)  | 130   | 160       | 180       | 4.5                 |  |                |         |  | 937      | 1035    | 303                 | 6       | 23      | 23                                | 24      | 72       | 19                        | -                       | 0.5              | 95.7                       | 609        | 2.4                        | 413   |                            |         |  |                                  |         |   |                                 |         |   |         |                                     |   |   |         |         |         |     |     |     |



Table 10: Water supply - asset management and water resource management

| WATER UTILITY   |                               | ASSET MANAGEMENT  |           |          |                     |            |  |         |                                   |  |         |             |                     |         |                                   |                       | WATER RESOURCE MANAGEMENT |                 |                           |                         |                      |                                       |                         |                            |   |  |   |         |         |   |   |                                     |   |         |         |         |         |         |     |     |  |
|---|-------------------------------|---|-----------|----------|---------------------|------------|--|---------|-----------------------------------|--|---------|-------------|---------------------|---------|-----------------------------------|-----------------------|---------------------------|-----------------|---------------------------|-------------------------|----------------------|---------------------------------------|-------------------------|----------------------------|---|--|---|---------|---------|---|---|-------------------------------------|---|---------|---------|---------|---------|---------|-----|-----|--|
|   |                               | Real Losses (Leakage)<br>(see also columns 2 and 3 of Table 8A, column 8 of Table 8 and columns 10, 13, 15 and 16 of Table 10A) |           |          |                     |            |  |         | Non-Revenue Water (NRW) (Potable) |  |         | Main Breaks |                     |         | Unplanned Interruptions to Supply |                       |                           | Rehabilitations |                           |                         | Renewals             |                                       | Mains Maintenance Cost  | Total Urban Water Supplied |   |  | Non-Potable Urban Water Supplied                                    |         |         | % Water Recycled (from Table 8)                     | Peak Day to Average Day Water Supplied                                    | Peak Week to Average Water Supplied | Average Annual Residential Water Supplied |         |         |         |         |         |     |     |  |
|   |                               | (L/d per connection)  |           |          | (kL/km/d)           | (ILI)      | Leakage Test (RDT#, WM#, NF#, Z#, L#, P) (See note 6)      |         |                                   | See W10.1 (Col 9 of Table 8 & Col 15 of Table 8A) (L/d per connection) |         |             | (per 100km of Main) |         |                                   | (per '000 properties) |                           |                 | Mains (% of Total Length) | Service Connections (%) | Water Meters (%)     | (\$'000 per 100km of Main)            | (% of CRC)              | (\$'000 per 100km of Main) | Potable + Non-potable + Recycled (Excluding Bulk Water Exports) (ML) (from Table 8) | For outdoor uses, industry excl agric (Excluding Recycled) (ML) (from Table 8) | (Total Vol Recycled (Urban + Ag Use)/Total Urban Water Supplied (%) | (%)     | (%)     | From Tables 6 & 8 [(1)÷(22a)] Potable (kL/property) | From Tables 6 & 8 [(1)+(11)+(12a))÷(22a) Potable+Nonpotable (kL/property) |                                     |   |         |         |         |         |         |     |     |  |
|   |                               | (41) A10  | (41a) A11 | (41b) A9 | Type & Extent (41c) | Year (41d) | Result % (41e)   | (41f)   | (42) A8                           | (43) C17   | (44)    | (45)        | (45a)               | (46)    | (47)                              | (48)                  | (49) W11                  | (50)            | (51)                      | (52)                    | (53)                 | (56a) P2.1                            | (56) W12                |                            |   |  |   |         |         |   |   |                                     |   |         |         |         |         |         |     |     |  |
|   |                               | 2012/13   | 2013/14   | 2014/15  | 2014/15             | 2014/15    | 2014/15  | 2014/15 | 2012/13                           | 2013/14  | 2014/15 | 2012/13     | 2013/14             | 2014/15 | 2012/13                           | 2013/14               | 2014/15                   | 2014/15         | 2014/15                   | 2014/15                 | 2012/13              | 2013/14                               | 2014/15                 | 2012/13                    | 2013/14   | 2014/15  | 2013/14   | 2014/15 | 2013/14 | 2014/15   | 2013/14   | 2014/15                             | 2012/13                                   | 2013/14 | 2014/15 | 2012/13 | 2013/14 | 2014/15 |     |     |  |
| 88  | Wakool (Dual Supply)          | 90  | 50        | 50       | 0.4                 | 1.1        | 2004   | 7       | 92                                | 68   | 70      | 2           | 7                   | 6       | 3                                 | 10                    | 6                         | 0.6             | -                         | -                       | 226                  | 1.16                                  | 64                      | 780                        | 770   | 770  | 405   | 405     | 405     | 0   | 109   | 109                                 | 109                                       | 146     | 143     | 142     | 517     | 507     | 502 |     |  |
| 89  | Bogan                         | 300   | 350       | 200      | 3.6                 | 5.0        | L99  | 2011    | 10                                | 680  | 759     | 315         | 19                  | 23      | 48                                | 47                    | 34                        | 24              |                           | 0.8                     | 7.9                  |                                       | 222                     | 850                        | 870   | 720  | 5   | 10      | 30      | 9   | 3   | 213                                 | 263                                       | 183     | 181     | 379     | 381     | 339     |     |     |  |
| 90  | Guyra                         | 70  | 110       | 70       | 1.6                 | 1.0        | RDT80  | 2009    | 8                                 | 116  | 168     | 102         | 6                   | 5       | 7                                 | 45                    | 52                        | 44              | -                         | 0.2                     | 3.5                  | 82                                    | 0.2                     |                            | 520   | 640  | 450   |         | 0       | 240   | 255   | 172                                 | 158                                       | 201     | 263     | 177     | 201     | 263     | 177 |     |  |
| 91  | Cabonne                       | 130   | 80        | 70       | 1.7                 | 1.5        | RDT  | 2015    | 9                                 | 139  | 97      | 84          | 19                  |         | 23                                |                       | 7                         | 5               | 1.9                       | 0.7                     | 0.7                  | 15                                    | 0.0                     | 10                         | 390   | 340  | 260   | 138     | 45      | 47  | 31  | 42                                  | 361                                       | 351     | 207     | 201     | 106     | 144     | 150 |     |  |
| 92  | Carrathool (Groundwater)      | 60  | 70        | 100      | 0.3                 | 1.0        | Z77  | 2009    | 10                                | 99   | 101     | 134         | 24                  | 22      | 20                                | 72                    | 1                         |                 | -                         | 6.2                     | 46                   | 1.0                                   | 61                      | 1,020                      | 860   | 1,050  | 533   | 504     | 573     | 0   | 0   | 451                                 |   |         | 447     | 313     | 488     | 532     | 392 | 611 |  |
| 93  | Tumbarumba                    | 40  | 90        | 80       | 1.5                 | 1.0        | Z73  | 2011    | 12                                | 135  | 222     | 136         | 8                   | 3       | 0                                 | 26                    | 22                        | 9               |                           | 0.4                     | 2.6                  | 1047                                  | 2.1                     | 108                        | 320   | 370  | 270   |         | 0       | 220   | 266   |                                     | 190                                       | 188     | 203     | 139     | 188     | 203     | 139 |     |  |
| 94  | Gundagai                      | 90  | 100       | 90       | 3.0                 |            |  | 2011    | 7                                 | 180  | 212     | 176         | 17                  | 11      |                                   | 13                    | 41                        |                 | -                         | -                       | -                    | 75                                    | 0.1                     | 67                         | 590   | 820  | 600   |         | 29      | 39  | 256   |                                     | 256                                       | 398     | 354     | 396     | 398     | 354     | 396 |     |  |
| 96  | Warren (Dual Supply)          | 90  | 90        | 100      | 3.2                 | 3.6        | L94  | 2011    | 5                                 | 168  | 168     | 189         | 103                 | 110     | 350                               | 10                    | 16                        | 21              | 3.3                       | 1.3                     | 6.6                  | 557                                   | 1.2                     | 413                        | 800   | 790  | 840   | 426     | 442     | 457   | 0   | 0                                   | 212                                       | 193     | 152     | 138     | 330     | 302     | 328 |     |  |
| 97  | Bombala                       | 30  | 40        | 30       | 0.7                 | 1.0        |  |         |                                   | 55   | 55      | 52          | 33                  | 33      | 26                                |                       |                           |                 | -                         | 0.1                     | 2.8                  | 126                                   | 0.2                     | 177                        | 340   | 180  | 280   |         | 83      | 24  | 7   | 223                                 | 231                                       | 127     | 132     | 175     | 188     | 188     |     |     |  |
| 98  | Walcha                        | 30  | 60        | 60       | 0.9                 | 4.2        | RDT95  | 2010    | 11                                | 44   | 63      | 60          | 0                   |         | 7                                 | 2                     |                           | 14              | -                         | 6.6                     | 0.3                  |                                       |                         | 81                         | 160   | 190  | 170   | 4       | 5       | 3   |   | 0                                   | 224                                       | 242     | 224     | 173     | 107     | 154     | 124 |     |  |
| 100   | Balranald (Dual Supply)       | 60  | 30        | 40       | 1.0                 | 1.0        |  |         |                                   | 97   | 45      | 57          | 3                   | 33      | 67                                |                       | 66                        |                 | -                         | 1.4                     |                      |                                       | 257                     | 1,100                      | 580   | 770  | 795   | 419     | 584     | 23  | 0   |                                     | 213                                       |         | 213     | 351     | 133     | 167     |     |     |  |
| 101   | Murrumbidgee (Groundwater)    | 130   | 180       | 170      | 4.5                 |            | Z78  | 2011    | 7                                 | 221  | 271     | 292         | 59                  | 16      |                                   |                       |                           |                 | -                         | -                       | 2.3                  | 147                                   | 0.5                     | 100                        | 700   | 780  | 790   |         | 4       | 3   | 312   |                                     | 119                                       |         | 513     | 571     | 635     |         |     |     |  |
| 103   | Central Darling (Dual Supply) | 30  | 30        | 30       | 0.3                 | 1.0        |  | 2010    |                                   | 48   | 44      | 47          | 18                  | 30      | 39                                | 14                    | 14                        | 16              |                           | 0.4                     | 0.5                  |                                       |                         | 142                        | 360   | 400  | 360   | 246     | 276     | 240   |   | 0                                   | 329                                       |         | 235     |         | 179     | 179     | 128 |     |  |
| 104   | Boorowa                       | 50  | 160       | 30       | 0.5                 | 1.0        |  | 2010    | 4                                 | 53   | 185     | 76          | 15                  | 8       | 6                                 | 3                     |                           | 55              | 2.1                       | 2.5                     | 7.4                  | 235                                   | 0.5                     | 254                        | 130   | 190  | 210   | 1       |         |   | 1   | 0                                   | 194                                       | 353     | 166     | 252     | 161     | 193     | 185 |     |  |
| 105   | Brewarrina (Dual Supply)      | 60  | 130       | 110      | 1.6                 | 1.9        | RDT  | 2012    | 7                                 | 131  | 218     | 181         | 68                  | 55      | 111                               | 6                     | 20                        | 4               | 2.6                       | 0.9                     | 0.6                  | 24                                    | 0.1                     | 316                        | 780   | 790  | 1,260   | 400     | 400     | 941   | 14  | 0                                   | 207                                       | 374     | 133     | 107     | 552     | 581     | 614 |     |  |
| 106   | Jerilderie (Dual Supply)      | 40  | 50        | 40       | 0.4                 | 1.0        |  |         |                                   | 73   | 84      | 67          | 7                   | 12      | 19                                | 20                    | 6                         | 16              |                           | 2.2                     | 0.2                  | 21                                    | 0.1                     | 140                        | 510   | 560  | 550   | 372     | 358     | 377   | 9   | 9                                   | 270                                       | 344     | 116     | 148     | 229     | 246     | 219 |     |  |
| Medians (% of LWUs basis) for 200 to 1,500 Properties |                               | 75  |           |          | 2                   | 1          | Note: ILI < 1.0 is meaningless & has been increased to 1.0 |         |                                   |  |         | 22          | 18                  | 20      | 21                                | 13                    | 14                        | 2               |                           |                         |                      | 123                                   |                         | 142                        | 615   | 705  | 720   |         | 12      | 0   |   |                                     |   | 209     | 215     | 186     | 302     | 440     | 449 |     |  |
| Median All LWUs (% of LWUs basis)                     |                               | Leakage   |           | 80       | 2.0                 | 1.1        | Main Breaks per 100km of main                              |         |                                   |  |         | 10          | Interruptions       |         |                                   | 14                    | Mains                     |                 |                           | 0.7                     | Renewals 0.5% of CRC |                                       | Median % Water Recycled |                            |   | 5%   | Av Annual Res Water Supplied  |         |         |   |   |                                     | 205                                       |         |         |         |         |         |     |     |  |
| Median All LWUs (Statewide basis)                     |                               | 60  |           |          |                     |            |  |         |                                   |  |         |             | 9                   |         |                                   | 24                    |                           |                 | Rehabilitations           |                         |                      | 0.4%                                  |                         |                            |   |  |   |         |         |   |   |                                     |   | 166     |         |         |         |         |     |     |  |
| Totals for all LWUs (excluding bulk suppliers)        |                               | 74 LWUs reported recent leakage testing   |           |          |                     |            |  |         |                                   |  |         |             |                     |         |                                   |                       |                           |                 |                           |                         |                      | Total Urban Water Supplied 291,000 ML |                         |                            |   |  | Non-potable Water (Urban) (excl recycled) 20,000 ML                 |         |         |   |   |                                     |   |         |         |         |         |         |     |     |  |

+ There are 12 LWUs with a dual water supply in 2014-15; Balranald, Berrigan, Bourke, Brewarrina, Central Darling, Hay, Jerilderie, Murray, Wakool, Walgett, Warren, Wentworth.  
For these 12 LWUs, note 8 on page 33 reports the approximate total potable annual residential water supplied per property, which is shown in column 56a above. This is lower than the value reported in Column 56 as it is calculated only for those towns with a dual supply.

Notes:

1. Table 10A shows the results for leakage testing for 68 LWUs under the Regional NSW Water Loss Management Program (WLMP) in columns 10 (before leakage detection and repair) and 13 (after leakage detection and repair). Table 10A shows that following leakage detection and repair, the average leakage for these utilities has decreased from 16% to 10% of the potable water supplied (from 164 L/d to 92 L/d per connection). Column 41c above shows the type and extent of leakage testing (Note 6 below) by each utility. This column shows that the leakage testing covered 90% of the service connections for Coffs Harbour (77% of the connections were covered by zoning and flow metering (Z77) and 13% were covered by leakage detection and repair (L13)). Similarly for Mid-Western Regional, 59% of the connections were covered by leakage detection and repair (L59). Column 41d shows the latest reported year of leakage testing for the utility and has been updated from column 18 of Table 10A. In addition, where a utility has not previously reported its result for column 41e, the result in column 13 of Table 10A has been included, subject to DPI Water's acceptance test in the next paragraph.  
However, the zones covered for many other utilities was a small percentage, eg. only 9% of the service connections for Byron (Z9) and 5% for Wyong (Z5). Leakage results of under 6% for a utility have only been accepted as a valid indicator of the utility's performance by DPI Water if the leakage testing covered at least 30% of the utility's service connections. The accepted results are shown in column 41e above and indicate the following 13 utilities have valid leakage test results of under 6% (Bathurst, Boorowa, Brewarrina, Coffs Harbour, Corowa, Griffith, Gunnedah, Moree Plains, Murray, Uralla, Warren, Wyong and Young).
2. The reported Real Losses shown above for NWI indicator A10 (column 41 above) have been rounded in recognition of the significant inherent errors in the determination of distribution system leakage.
3. To compare leakage with other LWUs, LWUs with >20 connections/km should use Real Losses (L/connection/day) (column 41 above), while LWUs with <20 connections/km should use Real Losses (L/km water main/day) (column 41a above).
4. **Leakage** relates only to Total Urban Water Supplied (potable) and excludes bulk water exports and non-potable water supplied. **Non Revenue Water** (NRW) comprises **Real Losses** (mostly leakage), **Apparent Losses** (under-registration of customer meters and illegal use) and **Unbilled Water** supplied (eg. mains flushing).  
As indicated on page 33, Non-Revenue Water (L/connection/d) should be used for tracking system performance over time. Use of Unaccounted for water (UFW) is not appropriate (see page 33) and should no longer be used by LWUs.
5. 74 LWUs have reported carrying out recent leakage testing and/or leakage detection and repair (columns 41c, 41d, 41e above).
6. Reservoir Drop Test (**RDT#**), Waste Metering (**WM#**), Night Flow Metering (**NF#**), Zoning and Flow Metering (**Z#**), Leakage Detection and Repair (**L#**), Pressure Reduction (**P**), where # is the percentage of service connections covered.  
Eg. L95 for Gwydir (column 41c above) indicates that the leakage detection and repair project carried out covered 95% of the utility's service connections.



Table 10A: Estimated Real Water Losses from Regional NSW Water Loss Management Program

| WATER UTILITY |                        | Zone                   | Utility Connections<br>2009-10<br>(No.) | Zone<br>Connections | Connection<br>Ratio<br>Zone:Utility | ILI<br>Before | Utility Potable<br>Annual Water<br>Supplied (ML)<br>2009-10 | Estimated Water Loss - Before |             |            | Estimated Water Loss - After |      |            | Annual<br>Water<br>Savings<br>(ML) | Test      | Test<br>Year | Page | Comments<br>(MNF refers to Minimum Night Flow)   |
|---------------|------------------------|------------------------|---|---------------------|-------------------------------------|---------------|---|-------------------------------|-------------|------------|------------------------------|------|------------|------------------------------------|-----------|--------------|------|--|
|               |                        |                        |   |                     |                                     |               |   | (L/c/d)                       | (ML)        | (%)        | (L/c/d)                      | (ML) | (%)        |                                    |           |              |      |  |
| (1)           |                        | (2)                    | (3)                                     | (4)                 | (5)                                 | (6)<br>A9     | (7)<br>W11.1  | (8)<br>A10                    | (9)         | (10)       | (11)<br>A10                  | (12) | (13)       | (14)                               | (15)      | (16)         | (17) | (18)   |
| 29            | Armidale Dumaresq      | Kentucky St            | 7740                                    | 400                 | 5%                                  | 2.7           | 2594  | 136                           | 19.9        | 15%        | 65                           | 9.5  | 7%         | 10.4                               | L5        | 2008         | 20   |  |
| 24            | Ballina                | Coastal Strip          |   | 450                 | 4%                                  | 2.4           |   | 186                           | 30.6        | 18%        | 131                          | 21.5 | 13%        | 9.1                                | L7, P     | 2010         | 22   | Pressure managed, ILI hasn't changed<br>Wide Bay Water job - big leak found  |
|               | Ballina                | Jameson Ave            |   | 370                 | 3%                                  | 18.8          |   | 905                           | 122         | 89%        | 54                           | 7.3  | 5%         | 115                                |           |              |      |  |
|               | <b>Ballina</b>         | <b>2 Zones</b>         | <b>10960</b>                            | <b>820</b>          | <b>7%</b>                           |               | <b>4050</b>   | <b>511</b>                    | <b>153</b>  | <b>50%</b> |                              |      | <b>10%</b> | <b>124</b>                         |           |              |      |  |
| 21            | Bathurst               | Eglington              | 13980                                   | 630                 | 5%                                  | 1.4           | 5999  | 75                            | 17.3        | 6%         |                              |      |            |                                    | Z5        | 2007         | 24   | Projected water savings insignificant  |
|               | Bega Valley            | Quaama                 |   | 97                  | 1%                                  | 0.3           |   | 17                            | 0.6         | 2%         |                              |      |            |                                    | WM20, Z39 | 2008         | 27   | Tiny zone, MNF of 0.05 L/s measured<br>Tiny zone, MNF of 0.1 L/s measured<br>Tiny zone, MNF of 0.1 L/s measured  |
|               | Bega Valley            | Wallaga                |   | 105                 | 1%                                  | 0.5           |   | 24                            | 0.9         | 3%         |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Pambula South          |   | 160                 | 1%                                  | 0.4           |   | 19                            | 1.1         | 2%         |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Pambula North          |   | 298                 | 3%                                  | 5.4           |   | 365                           | 39.7        | 43%        |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Eden North             |   | 407                 | 4%                                  | 0.4           |   | 24                            | 3.6         | 3%         |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Pambula Beach          |   | 507                 | 4%                                  | 4.8           |   | 292                           | 54.1        | 34%        |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Eden South             |   | 907                 | 8%                                  | 0.7           |   | 46                            | 15.2        | 5%         |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Bega                   |   | 2000                | 17%                                 | 1.5           |   | 83                            | 60.9        | 10%        |                              |      |            |                                    |           |              |      |  |
|               | Bega Valley            | Tura                   |   | 589                 | 5%                                  | 4.2           |   | 192                           | 41.3        | 22%        | 16                           | 3.5  | 2%         | 37.8                               |           |              |      |  |
|               | Bega Valley            | Merimbula              |   | 1709                | 15%                                 | 3.7           |   | 241                           | 151         | 28%        | 110                          | 68.6 | 13%        | 82.0                               |           |              |      |  |
| 23            | <b>Bega Valley</b>     | <b>10 Zones</b>        | <b>11530</b>                            | <b>6779</b>         | <b>59%</b>                          |               | <b>3600</b>   | <b>149</b>                    | <b>368</b>  | <b>17%</b> |                              |      | <b>12%</b> | <b>120</b>                         |           |              |      |  |
|               | Bellingen              | Yellow Rock            |   | 140                 | 3%                                  | 0.8           |   | 31                            | 1.6         | 4%         | 27                           | 1.4  | 3%         | 0.2                                | L48, P    | 2011         | 29   | PM only<br>PM only<br>Estimated reduction for leak results<br>Estimated reduction for leak results<br>Includes trunk and retic leak detection  |
|               | Bellingen              | Newry Island           |   | 130                 | 3%                                  | 1.0           |   | 76                            | 3.6         | 9%         | 13                           | 0.6  | 2%         | 3.0                                |           |              |      |  |
|               | Bellingen              | Urunga                 |   | 923                 | 22%                                 | 3.6           |   | 89                            | 30.1        | 11%        | 69                           | 23.2 | 8%         | 6.9                                |           |              |      |  |
|               | Bellingen              | Mylestom               |   | 185                 | 4%                                  | 3.8           |   | 178                           | 12.0        | 22%        | 43                           | 2.9  | 5%         | 9.1                                |           |              |      |  |
|               | Bellingen              | North Bellingen PMZ    |   | 670                 | 16%                                 | 1.9           |   | 137                           | 33.4        | 17%        | 28                           | 6.9  | 3%         | 26.5                               |           |              |      |  |
| 47            | <b>Bellingen</b>       | <b>5 Zones</b>         | <b>4260</b>                             | <b>2048</b>         | <b>48%</b>                          |               | <b>1279</b>   | <b>108</b>                    | <b>80.7</b> | <b>13%</b> |                              |      | <b>6%</b>  | <b>45.7</b>                        |           |              |      |  |
|               | Berrigan               | Barooga                |   | 671                 | 21%                                 | 1.3           |   | 29                            | 7.2         | 4%         |                              |      |            | 9.4                                | L76       | 2011         | 30   |  |
|               | Berrigan               | Berrigan               |   | 470                 | 14%                                 | 2.1           |   | 73                            | 12.6        | 11%        | 19                           | 3.2  | 3%         | 28.4                               |           |              |      |  |
|               | Berrigan               | Finley                 |   | 1018                | 31%                                 | 3.5           |   | 116                           | 43.2        | 17%        | 40                           | 14.8 | 6%         | 91.4                               |           |              |      |  |
|               | Berrigan               | Tocumwal               |   | 974                 | 30%                                 | 9.3           |   | 389                           | 138         | 57%        | 131                          | 46.7 | 19%        |                                    |           |              |      |  |
| 53            | <b>Berrigan</b>        | <b>4 Zones</b>         | <b>3250</b>                             | <b>3133</b>         | <b>96%</b>                          |               | <b>811</b>  | <b>176</b>                    | <b>201</b>  | <b>26%</b> |                              |      | <b>9%</b>  | <b>129</b>                         |           |              |      |  |
| 89            | Bogan                  | Nyngan                 | 1080                                    | 1074                | 99%                                 | 16.6          | 582   | 512                           | 201         | 35%        | 351                          | 138  | 24%        | 63.1                               | L99       | 2011         | 32   | Interim result   |
| 105           | Brewarrina             | Brewarrina             | 540                                     | 435                 | 81%                                 | 12.8          | 226   | 384                           | 61.0        | 34%        |                              |      |            |                                    | RDT81     | 2009         | 36   | No project undertaken  |
|               | Byron                  | Kolora Way DMA         |   | 880                 | 9%                                  | 0.7           |   | 46                            | 14.7        | 5%         |                              |      |            | 8.8                                | Z9, L8    | 2009         | 38   | No impact from leak repairs here<br><br>Updated flow results August 11   |
|               | Byron                  | Orana Rd DMA           |   | 240                 | 3%                                  | 2.4           |   | 159                           | 13.9        | 19%        | 58                           | 5.1  | 7%         |                                    |           |              |      |  |
|               | Byron                  | Balemo Dr DMA (Net)    |   | 480                 | 5%                                  | 6.7           |   | 455                           | 79.7        | 54%        | 20                           | 3.5  | 2%         | 76.2                               |           |              |      |  |
| 27            | <b>Byron</b>           | <b>3 Zones</b>         | <b>9590</b>                             | <b>1600</b>         | <b>17%</b>                          |               | <b>2954</b>   | <b>185</b>                    | <b>108</b>  | <b>22%</b> |                              |      | <b>5%</b>  | <b>85.0</b>                        |           |              |      |  |
| 91            | Cabonne                | Molong High & Low      | 1110                                    | 780                 | 70%                                 | 4.1           | 232   | 225                           | 64.1        | 39%        | 70                           | 20.0 | 12%        | 44.1                               | L70       | 2011         | 40   |  |
|               | Carrathool             | Goolgowi Raw           |   | 127                 | 12%                                 | 5.9           |   | 382                           | 17.7        | 15%        |                              |      |            |                                    | Z77       | 2010         | 40   | Lack of Council funds to proceed<br>Lack of Council funds to proceed<br>Lack of Council funds to proceed   |
|               | Carrathool             | Goolgowi Potable       |   | 143                 | 13%                                 | 0.9           |   | 50                            | 2.6         | 2%         |                              |      |            |                                    |           |              |      |  |
|               | Carrathool             | Hillston               |   | 553                 | 52%                                 | 9.3           |   | 276                           | 55.8        | 11%        |                              |      |            |                                    |           |              |      |  |
| 92            | <b>Carrathool</b>      | <b>3 Zones</b>         | <b>1070</b>                             | <b>823</b>          | <b>77%</b>                          |               | <b>1028</b>   | <b>253</b>                    | <b>76.1</b> | <b>10%</b> |                              |      | <b>10%</b> | <b>0.0</b>                         |           |              |      |  |
|               | Clarence Valley        | Iluka & Woody Head     |   | 1140                | 5%                                  | 0.5           |   | 35                            | 14.5        | 4%         |                              |      |            |                                    | L61, Z5   | 2011         | 44   | No leak detection done as ILI low already<br><br><br>Big leak found  |
|               | Clarence Valley        | Maclean                |   | 1629                | 8%                                  | 1.4           |   | 83                            | 49.1        | 10%        | 61                           | 36.4 | 7%         | 12.7                               |           |              |      |  |
|               | Clarence Valley        | Yamba & surrounds      |   | 3613                | 17%                                 | 2.1           |   | 134                           | 176         | 16%        | 73                           | 96.7 | 9%         | 79.4                               |           |              |      |  |
|               | Clarence Valley        | Grafton                |   | 7878                | 37%                                 | 3.5           |   | 329                           | 945         | 40%        | 171                          | 492  | 21%        | 453                                |           |              |      |  |
| 14            | <b>Clarence Valley</b> | <b>4 Zones</b>         | <b>21430</b>                            | <b>14260</b>        | <b>67%</b>                          |               | <b>6503</b>   | <b>228</b>                    | <b>1185</b> | <b>27%</b> |                              |      | <b>15%</b> | <b>545</b>                         |           |              |      |  |
|               | Coffs Harbour          | Sawtell                |   | 1433                | 6%                                  | 0.4           |   | 25                            | 12.9        | 3%         |                              |      |            |                                    | Z77, L13  | 2010         | 48   | No significant leakage<br>No significant leakage<br>Council not willing to pursue this zone<br>No significant leakage<br>No significant leakage<br>No significant leakage<br>Total predicted savings low - 2.2ML/y |
|               | Coffs Harbour          | Toormina               |   | 4669                | 21%                                 | 0.5           |   | 18                            | 30.3        | 2%         |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | South Coffs            |   | 4148                | 18%                                 | 1.6           |   | 95                            | 143         | 12%        |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | North Coffs - Red Hill |   | 4978                | 22%                                 | 0.8           |   | 42                            | 75.9        | 6%         |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | Sandy Beach            |   | 745                 | 3%                                  | 0.7           |   | 30                            | 8.1         | 4%         |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | Sapphire Beach         |   | 552                 | 2%                                  | 0.1           |   | 5                             | 1.0         | 1%         |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | Moonee                 |   | 207                 | 1%                                  | 1.7           |   | 78                            | 5.9         | 10%        |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | Emerald Beach          |   | 693                 | 3%                                  | 1.2           |   | 66                            | 16.7        | 9%         |                              |      |            |                                    |           |              |      |  |
|               | Coffs Harbour          | North Coffs - Macauley |   | 3047                | 13%                                 | 0.7           |   | 41                            | 45.2        | 5%         | 16                           | 17.9 | 2%         | 27.2                               |           |              |      |  |
| 10            | <b>Coffs Harbour</b>   | <b>9 Zones</b>         | <b>22620</b>                            | <b>20472</b>        | <b>91%</b>                          |               | <b>6273</b>   | <b>45</b>                     | <b>339</b>  | <b>6%</b>  |                              |      | <b>5%</b>  | <b>27.2</b>                        |           |              |      |  |
|               | Cooma-Monaro           | CH Yallakool           |   | 285                 | 8%                                  | 2.5           |   | 146                           | 15.2        | 16%        |                              |      |            |                                    | L59       | 2011         | 50   |  |
|               | Cooma-Monaro           | Pine Range             |   | 520                 | 14%                                 | 1.8           |   | 106                           | 20.1        | 12%        |                              |      |            |                                    |           |              |      |  |
|               | Cooma-Monaro           | Church Hill South      |   | 1053                | 28%                                 | 2.3           |   | 141                           | 54.0        | 16%        | 91                           | 35.0 | 10%        | 19.0                               |           |              |      |  |
|               | Cooma-Monaro           | Snowy Reservoir        |   | 1166                | 31%                                 | 2.0           |   | 131                           | 55.8        | 15%        | 39                           | 16.7 | 4%         | 39.1                               |           |              |      |  |
| 50            | <b>Cooma-Monaro</b>    | <b>4 Zones</b>         | <b>3780</b>                             | <b>3024</b>         | <b>80%</b>                          |               | <b>1227</b>   | <b>131</b>                    | <b>145</b>  | <b>15%</b> |                              |      | <b>9%</b>  | <b>58.1</b>                        |           |              |      |  |
| 58            | Cootamundra            | Cootamundra            | 3010                                    | 2790                | 93%                                 | 2.0           | 707   | 138                           | 140         | 21%        | 85                           | 86.4 | 13%        | 53.7                               | L93       | 2010         | 52   |  |

Table 10A: Estimated Real Water Losses from Regional NSW Water Loss Management Program

| WATER UTILITY |                            | Zone  | Utility Connections<br>2009-10<br>(No.) | Zone<br>Connections        | Connection<br>Ratio<br>Zone:Utility | ILI<br>Before    | Utility Potable<br>Annual Water<br>Supplied (ML)<br>2009-10 | Estimated Water Loss - Before |                           |                        | Estimated Water Loss - After |      |           | Annual<br>Water<br>Savings<br>(ML) | Test     | Test<br>Year | Page | Comments<br>(MNF refers to Minimum Night Flow)                                 |
|---------------|----------------------------|---|---|----------------------------|-------------------------------------|------------------|---|-------------------------------|---------------------------|------------------------|------------------------------|------|-----------|------------------------------------|----------|--------------|------|--|
|               |                            |   |   |                            |                                     |                  |   | (L/c/d)                       | (ML)                      | (%)                    | (L/c/d)                      | (ML) | (%)       |                                    |          |              |      |  |
| (1)           |                            | (2)   | (3)                                     | (4)                        | (5)                                 | (6)<br>A9        | (7)<br>W11.1  | (8)<br>A10                    | (9)                       | (10)                   | (11)<br>A10                  | (12) | (13)      | (14)                               | (15)     | (16)         | (17) | (18)   |
| 42            | Corowa<br>Corowa<br>Corowa | Howlong<br>Corowa LL<br>2 Zones                     | 4900                                    | 952<br>1844<br>2796        | 19%<br>38%<br>57%                   | 0.8<br>1.9       | 2183  | 35<br>68<br>56                | 12.2<br>45.4<br>57.6      | 3%<br>6%<br>5%         |                              |      | 5%        | 0.0                                | Z57      | 2008         | 54   |  |
| 39            | Cowra<br>Cowra<br>Cowra    | ICL1<br>Low Level<br>High & Intermediate<br>3 Zones | 5470                                    | 18<br>1746<br>2459<br>4223 | 0.3%<br>32%<br>45%<br>77%           | NA<br>1.2<br>4.2 | 2790  | 0<br>89<br>221<br>165         | 0.0<br>56.4<br>198<br>254 | 0%<br>6%<br>16%<br>12% | 171                          | 154  | 10%       | 44.1<br>44.1                       | L42      | 2011         | 58   | New Zone with zero MNF. ILI calc not possible<br>No major change in night flow |
| 54            | Deniliquin                 | Deniliquin  | 3560                                    | 3613                       | 100%                                | 3.9              | 2430  | 151                           | 199                       | 8%                     | 118                          | 155  | 6%        | 44.2                               | L100     | 2011         | 60   | High industrial usage overnight  |
|               | Dubbo                      | Spears Drive  |   | 344                        | 2%                                  | 1.0              |   | 38                            | 4.7                       | 3%                     | 5                            | 0.6  | 0%        | 4.1                                |          |              |      | Very low meter readings  |
|               | Dubbo                      | Wheelers Lane                                       |   | 861                        | 6%                                  | 4.3              |   | 229                           | 71.8                      | 16%                    | 56                           | 17.6 | 4%        | 54.2                               |          |              |      | Pressure managed   |
|               | Dubbo                      | Snake Pit   |   | 2800                       | 19%                                 | 2.8              |   | 125                           | 128                       | 9%                     | 14                           | 14.0 | 1%        | 114                                |          |              |      |  |
|               | Dubbo                      | Myall/Sheraton                                      |   | 267                        | 2%                                  | 6.0              |   | 357                           | 34.8                      | 25%                    | 260                          | 25.3 | 18%       | 9.5                                |          |              |      |  |
|               | Dubbo                      | Websdale  |   | 835                        | 6%                                  | 2.5              |   | 175                           | 53.2                      | 12%                    | 140                          | 42.7 | 10%       | 10.5                               |          |              |      |  |
|               | Dubbo                      | Luna Park   |   | 622                        | 4%                                  | 10.7             |   | 566                           | 129                       | 40%                    | 399                          | 90.7 | 28%       | 37.8                               |          |              |      |  |
| 18            | Dubbo                      | Davidson<br>7 Zones                                 | 14830                                   | 763<br>6492                | 5%<br>44%                           | 6.7              | 7692  | 422<br>227                    | 117<br>538                | 30%<br>16%             | 252                          | 70.1 | 18%<br>8% | 47.3<br>277                        | L44      | 2011         | 64   |  |
| 26            | Essential Water            | Broken Hill South                                   | 10370                                   | 1867                       | 18%                                 | 0.9              | 4747  | 28                            | 19.1                      | 2%                     |                              |      |           |                                    | WM18     | 2011         | 56   | No significant leakage   |
|               | Eurobodalla                | Mystery Bay   |   | 139                        | 1%                                  | 0.5              |   | 32                            | 1.6                       | 5%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | North Narooma/HL                                    |   | 300                        | 2%                                  | 0.6              |   | 38                            | 4.2                       | 6%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Bodalla   |   | 301                        | 2%                                  | 1.0              |   | 91                            | 10.0                      | 15%                    |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Moruya Heads  |   | 464                        | 3%                                  | 0.9              |   | 51                            | 8.7                       | 8%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Lilli Pilli   |   | 569                        | 3%                                  | 0.1              |   | 3                             | 0.7                       | 1%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Long Beach  |   | 670                        | 4%                                  | 0.9              |   | 36                            | 8.7                       | 6%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | South Narooma                                       |   | 847                        | 5%                                  | 0.1              |   | 8                             | 2.6                       | 1%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Denhams Beach Res                                   |   | 862                        | 5%                                  | 0.5              |   | 30                            | 9.5                       | 5%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Surf Beach Res Low                                  |   | 1042                       | 6%                                  | 3.0              |   | 129                           | 49.2                      | 21%                    |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Moruya T2   |   | 1162                       | 6%                                  | 1.3              |   | 86                            | 36.4                      | 14%                    |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Mossy Point   |   | 1313                       | 7%                                  | 0.5              |   | 31                            | 14.8                      | 5%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Dalmeny   |   | 1445                       | 8%                                  | 1.1              |   | 42                            | 22.0                      | 7%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Tuross Heads  |   | 1466                       | 8%                                  | 0.4              |   | 23                            | 12.3                      | 4%                     |                              |      |           |                                    |          |              |      |  |
|               | Eurobodalla                | Catalina 2  |   | 3471                       | 19%                                 | 1.1              |   | 79                            | 101                       | 13%                    | 65                           | 82.9 | 11%       | 17.7                               |          |              |      |  |
| 15            | Eurobodalla                | 14 Zones  | 17880                                   | 14051                      | 79%                                 |                  | 4034  | 55                            | 281                       | 9%                     |                              |      | 8%        | 17.7                               | Z59      | 2007         | 66   |  |
| 51            | Forbes                     | Forbes  | 3540                                    | 3433                       | 97%                                 | 5.2              | 1793  | 296                           | 371                       | 21%                    | 155                          | 194  | 11%       | 177                                | RDT, L97 | 2011         | 68   | Estimated post project MNF   |
| 60            | Glen Innes Severn          | Glen Innes  | 3320                                    | 2700                       | 81%                                 | 1.4              | 655   | 129                           | 127                       | 24%                    | 37                           | 36.1 | 7%        | 91.1                               | L81, P   | 2010         | 70   | 4 zones created, 2 pressure managed  |
|               | Gosford                    | Patonga   |   | 244                        | 0.4%                                | 8.8              |   | 717                           | 63.9                      | 115%                   | 9                            | 0.8  | 1%        | 63.1                               |          |              |      | Pressure reduced from 74mH to 50m  |
|               | Gosford                    | St Huberts  |   | 530                        | 1%                                  | 3.0              |   | 219                           | 42.4                      | 35%                    | 8                            | 1.5  | 1%        | 41.0                               |          |              |      | Pressure reduced from 78mH to 50m  |
| 1             | Gosford                    | 2 Zones   | 59510                                   | 774                        | 1%                                  |                  | 13594   | 376                           | 106                       | 60%                    |                              |      | 1%        | 104                                | L1, P    | 2011         | 72   |  |
| 20            | Goulburn Mulwaree          | Goulburn  | 9100                                    | 6973                       | 77%                                 | 4.7              | 2213  | 296                           | 752                       | 44%                    | 70                           | 177  | 10%       | 575                                | L77      | 2011         | 74   |  |
|               | Greater Hume               | Culcairn  |   | 600                        | 34%                                 | 2.9              |   | 89                            | 19.4                      | 12%                    |                              |      |           |                                    |          |              |      |  |
|               | Greater Hume               | Jindera   |   | 675                        | 39%                                 | 0.5              |   | 81                            | 20.0                      | 11%                    |                              |      |           |                                    |          |              |      |  |
| 80            | Greater Hume               | 2 Zones   | 1740                                    | 1275                       | 73%                                 |                  | 488   | 85                            | 39.4                      | 11%                    |                              |      | 11%       | 0.0                                | L73, RDT | 2008         | 76   |  |
|               | Griffith                   | DMA 6 South   |   | 3282                       | 37%                                 | 2.8              |   | 282                           | 337                       | 13%                    | 71                           | 85.1 | 3%        | 252                                |          |              |      |  |
|               | Griffith                   | Wyangan   |   | 251                        | 3%                                  | 1.9              |   | 388                           | 35.5                      | 18%                    | 78                           | 7.1  | 4%        | 28.4                               |          |              |      |  |
|               | Griffith                   | Upper Collina                                       |   | 737                        | 8%                                  | 2.3              |   | 116                           | 31.2                      | 5%                     | 22                           | 6.0  | 1%        | 25.2                               |          |              |      |  |
| 30            | Griffith                   | 3 Zones   | 8970                                    | 4270                       | 48%                                 |                  | 6988  | 259                           | 404                       | 12%                    |                              |      | 3%        | 306                                | L48, P   | 2011         | 78   |  |
|               | Gunnedah                   | Low Zone  |   | 1210                       | 27%                                 | 1.2              |   | 49                            | 21.4                      | 3%                     |                              |      |           |                                    |          |              |      | No significant leakage   |
|               | Gunnedah                   | Mid Zone  |   | 2826                       | 63%                                 | 1.4              |   | 98                            | 101                       | 7%                     | 60                           | 62.1 | 4%        | 39.3                               |          |              |      | Reservoir repairs were expensive   |
| 44            | Gunnedah                   | 2 Zones   | 4460                                    | 4036                       | 90%                                 |                  | 2299  | 83                            | 123                       | 6%                     |                              |      | 4%        | 39.3                               | L63      | 2011         | 84   |  |
| 90            | Guyra                      | Guyra   | 1120                                    | 900                        | 80%                                 | 1.4              | 491   | 92                            | 30.1                      | 8%                     |                              |      |           |                                    | RDT80    | 2009         | 86   | Lack of resources  |
|               | Gwydir                     | Bingara   |   | 872                        | 52%                                 | 2.3              |   | 142                           | 45.3                      | 14%                    | 105                          | 33.5 | 10%       | 11.8                               |          |              |      |  |
|               | Gwydir                     | Warialda  |   | 721                        | 43%                                 | 11.5             |   | 458                           | 121                       | 45%                    | 19                           | 5.0  | 2%        | 116                                |          |              |      | One leak already found and fixed   |
| 81            | Gwydir                     | 2 Zones   | 1670                                    | 1593                       | 95%                                 |                  | 626   | 285                           | 166                       | 28%                    |                              |      | 6%        | 127                                | L95      | 2011         | 88   |  |
|               | Harden                     | Jugiong Low   |   | 70                         | 4%                                  | NA               |   | 0                             | 0.0                       | 0%                     |                              |      |           |                                    |          |              |      | MNF is zero, ILI calc not possible   |
|               | Harden                     | Jugiong High  |   | 104                        | 6%                                  | NA               |   | 0                             | 0.0                       | 0%                     |                              |      |           |                                    |          |              |      | MNF is zero, ILI calc not possible   |
|               | Harden                     | Galong  |   | 214                        | 12%                                 | NA               |   | 0                             | 0.0                       | 0%                     |                              |      |           |                                    |          |              |      | MNF is zero, ILI calc not possible   |
|               | Harden                     | Harden  |   | 800                        | 43%                                 | 1.6              |   | 118                           | 34.3                      | 11%                    | 101                          | 29.6 | 9%        | 4.7                                |          |              |      |  |
| 76            | Harden                     | 4 Zones   | 1850                                    | 1188                       | 64%                                 |                  | 747   | 79                            | 34.3                      | 7%                     |                              |      | 6%        | 4.7                                | L43      | 2011         | 90   |  |
|               | Hay                        | Hay potable   |   | 1200                       | 49%                                 | 3.9              |   | 102                           | 44.6                      | 23%                    | 66                           | 28.8 | 15%       | 15.8                               |          |              |      |  |
|               | Hay                        | Hay raw   |   | 1200                       | 49%                                 | 4.1              |   | 131                           | 57.4                      | 30%                    | 37                           | 16.4 | 9%        | 41.0                               |          |              |      |  |
| 86            | Hay                        | 2 Zones   | 2430                                    | 2400                       | 99%                                 |                  | 388   | 116                           | 102                       | 27%                    |                              |      | 12%       | 56.8                               | L98      | 2011         | 92   |  |



Table 10A: Estimated Real Water Losses from Regional NSW Water Loss Management Program

| WATER UTILITY |                         | Zone               | Utility Connections<br>2009-10<br>(No.) | Zone<br>Connections | Connection<br>Ratio<br>Zone:Utility | ILI<br>Before | Utility Potable<br>Annual Water<br>Supplied (ML)<br>2009-10 | Estimated Water Loss - Before |      |      | Estimated Water Loss - After |      |      | Annual<br>Water<br>Savings<br>(ML) | Test     | Test<br>Year | Page | Comments<br>(MNF refers to Minimum Night Flow)   |
|---------------|-------------------------|--------------------|---|---------------------|-------------------------------------|---------------|---|-------------------------------|------|------|------------------------------|------|------|------------------------------------|----------|--------------|------|--|
|               |                         |                    |   |                     |                                     |               |   | (L/c/d)                       | (ML) | (%)  | (L/c/d)                      | (ML) | (%)  |                                    |          |              |      |  |
| (1)           |                         | (2)                | (3)                                     | (4)                 | (5)                                 | (6)<br>A9     | (7)<br>W11.1  | (8)<br>A10                    | (9)  | (10) | (11)<br>A10                  | (12) | (13) | (14)                               | (15)     | (16)         | (17) | (18)   |
| 25            | Kempsey                 | Kempsey            | 11370                                   | 11500               | 100%                                |               | 3734  | 152                           | 638  | 17%  | 146                          | 613  | 16%  | 25.2                               | L100     | 2008         | 94   | No meters were installed during this project, so there is no mechanism for monitoring water loss |
| 48            | Leeton                  | Leeton             | 4340                                    | 4027                | 93%                                 | 8.5           | 2956  | 274                           | 403  | 15%  | 161                          | 236  | 9%   | 167                                | L93      | 2011         | 96   |  |
|               | Liverpool Plains        | Wallabadah         |   | 137                 | 5%                                  | 3.0           |   | 148                           | 7.4  | 15%  | 22                           | 1.1  | 2%   | 6.3                                |          |              |      | Updated June 2011  |
|               | Liverpool Plains        | Willow Tree        |   | 190                 | 7%                                  | 16.9          |   | 880                           | 61.0 | 89%  | 198                          | 13.7 | 20%  | 47.3                               |          |              |      |  |
| 61            | Liverpool Plains        | 2 Zones            | 2540                                    | 327                 | 13%                                 |               | 920   | 573                           | 68.4 | 58%  |                              |      | 12%  | 53.6                               | L13      | 2011         | 102  |  |
| 5             | MidCoast Water          | Hawks Nest         | 32910                                   | 2346                | 7%                                  | 2.3           | 9163  | 175                           | 150  | 23%  | 122                          | 105  | 16%  | 45.3                               | P7       | 2010         | 106  | Pressure managed only, no leak detection   |
|               | Mid-Western             | Mudgee High        |   | 1664                | 26%                                 | 1.3           |   | 132                           | 80.2 | 12%  | 79                           | 48.1 | 7%   | 32.1                               |          |              |      |  |
|               | Mid-Western             | Mudgee Low         |   | 2147                | 33%                                 | 2.2           |   | 132                           | 103  | 12%  | 67                           | 52.7 | 6%   | 50.8                               |          |              |      |  |
| 32            | Mid-Western             | 2 Zones            | 6490                                    | 3811                | 59%                                 |               | 2536  | 132                           | 184  | 12%  |                              |      | 7%   | 82.8                               | L59      | 2011         | 108  |  |
| 38            | Moree Plains            | Moree              | 4790                                    | 4554                | 95%                                 | 4.4           | 3183  | 129                           | 215  | 7%   | 56                           | 93.2 | 3%   | 122                                | L95      | 2011         | 110  |  |
|               | Murray                  | Moama potable      |   | 2263                | 86%                                 | 0.6           |   | 20                            | 16.2 | 3%   |                              |      |      | 12.6                               |          |              |      |  |
|               | Murray                  | Mathoura potable   |   | 424                 | 16%                                 | 4.4           |   | 111                           | 17.2 | 15%  | 30                           | 4.6  | 4%   | 12.6                               |          |              |      |  |
| 65            | Murray                  | 2 Zones            | 2640                                    | 2687                | 100%                                |               | 711   | 34                            | 33.4 | 5%   |                              |      | 3%   | 12.6                               | Z86, L16 | 2011         | 112  |  |
|               | Murrumbidgee            | Coleambally        |   | 373                 | 38%                                 | 5.4           |   | 176                           | 24.0 | 9%   |                              |      |      |                                    |          |              |      |  |
|               | Murrumbidgee            | Darlington Point   |   | 398                 | 40%                                 | 1.9           |   | 72                            | 10.4 | 4%   |                              |      |      |                                    |          |              |      |  |
| 101           | Murrumbidgee            | 2 Zones            | 990                                     | 771                 | 78%                                 |               | 672   | 122                           | 34.4 | 7%   |                              |      | 7%   | 0.0                                | Z78      | 2010         | 114  |  |
|               | Muswellbrook            | Denman             |   | 620                 | 11%                                 | 4.9           |   | 182                           | 41.1 | 15%  | 70                           | 15.8 | 6%   | 25.3                               |          |              |      |  |
|               | Muswellbrook            | Sandy Hollow       |   | 60                  | 1%                                  | 5.5           |   | 315                           | 6.9  | 26%  | 87                           | 1.9  | 7%   | 5.0                                |          |              |      |  |
| 41            | Muswellbrook            | 2 Zones            | 5410                                    | 680                 | 13%                                 |               | 2385  | 193                           | 48.0 | 16%  |                              |      | 6%   | 30.3                               | L12      | 2010         | 116  |  |
|               | Nambucca                | North Macksville   |   | 720                 | 12%                                 | 1.3           |   | 30                            | 7.8  | 4%   |                              |      |      |                                    |          |              |      | No significant leakage<br>No significant leakage<br>No significant leakage                       |
|               | Nambucca                | Valla Beach        |   | 500                 | 9%                                  | 0.4           |   | 9                             | 1.6  | 1%   |                              |      |      |                                    |          |              |      |  |
|               | Nambucca                | Scotts Head        |   | 615                 | 11%                                 | 1.7           |   | 37                            | 8.3  | 5%   |                              |      |      |                                    |          |              |      |  |
|               | Nambucca                | South Macksville   |   | 440                 | 8%                                  | 1.6           |   | 79                            | 12.7 | 11%  | 42                           | 6.7  | 6%   | 6.0                                |          |              |      |  |
|               | Nambucca                | Bowraville         |   | 504                 | 9%                                  | 2.8           |   | 86                            | 15.9 | 12%  | 35                           | 6.5  | 5%   | 9.4                                |          |              |      |  |
|               | Nambucca                | Nambucca Heads     |   | 2502                | 43%                                 | 2.9           |   | 101                           | 91.8 | 14%  | 51                           | 46.8 | 7%   | 45.0                               |          |              |      |  |
| 34            | Nambucca                | 6 Zones            | 5820                                    | 5281                | 91%                                 |               | 1534  | 72                            | 138  | 10%  |                              |      | 6%   | 60.4                               | Z32, L59 | 2010         | 118  |  |
| 46            | Narrabri                | Mooloolbar St      | 3980                                    | 716                 | 18%                                 | 2.2           | 2295  | 63                            | 16.4 | 4%   |                              |      |      |                                    | Z18      |              | 120  | No significant leakage   |
| 62            | Narromine               | Narromine          | 2220                                    | 1758                | 79%                                 | 4.6           | 1111  | 145                           | 92.7 | 11%  | 81                           | 51.7 | 6%   | 41.0                               | L79      | 2011         | 124  | After data estimated   |
| 83            | Oberon                  | HL & LL combined   | 1360                                    | 1314                | 97%                                 | 5.7           | 568   | 223                           | 107  | 19%  | 78                           | 37.6 | 7%   | 69.4                               | L97      | 2011         | 126  |  |
| 19            | Orange                  | Orange             | 15370                                   | 15055               | 98%                                 | 2.2           | 3896  | 152                           | 836  | 22%  | 61                           | 335  | 9%   | 501                                | L98      | 2011         | 128  |  |
|               | Palerang                | Captains Flat East |   | 250                 | 12%                                 | 0.3           |   | 26                            | 2.4  | 4%   |                              |      |      |                                    |          |              |      |  |
|               | Palerang                | Braidwood          |   | 692                 | 34%                                 | 0.6           |   | 22                            | 5.5  | 3%   |                              |      |      |                                    |          |              |      |  |
|               | Palerang                | Bungendore         |   | 1051                | 52%                                 | 2.9           |   | 113                           | 43.5 | 17%  | 55                           | 21.1 | 8%   | 22.4                               |          |              |      |  |
| 71            | Palerang                | 3 Zones            | 2030                                    | 1993                | 98%                                 |               | 490   | 71                            | 51.4 | 11%  |                              |      | 6%   | 22.4                               | L91      | 2011         | 130  |  |
|               | Parkes                  | East Zone          |   | 615                 | 9%                                  | 3.1           |   | 232                           | 52.1 | 8%   |                              |      |      | 72.6                               |          |              |      | No significant results. Costs in High Zone   |
|               | Parkes                  | High Zone          |   | 1004                | 15%                                 | 4.3           |   | 227                           | 83.2 | 8%   | 29                           | 10.6 | 1%   | 72.6                               |          |              |      |  |
| 36            | Parkes                  | 2 Zones            | 6500                                    | 1619                | 25%                                 |               | 6606  | 229                           | 135  | 8%   |                              |      | 4%   | 72.6                               | Z9, L15  | 2011         | 132  |  |
| 7             | Port Macquarie-Hastings | Mill Hill          | 26210                                   | 1486                | 6%                                  | 3.0           | 6391  | 134                           | 72.9 | 20%  | 94                           | 50.9 | 14%  | 22.0                               | L6       | 2011         | 134  |  |
|               | Queanbeyan              | Crest              |   | 4251                | 37%                                 | 4.8           |   | 288                           | 447  | 28%  |                              |      |      |                                    |          |              |      | Project not undertaken<br>Project not undertaken<br>Project not undertaken                       |
|               | Queanbeyan              | Greenleigh         |   | 235                 | 2%                                  | 1.9           |   | 124                           | 10.6 | 12%  |                              |      |      |                                    |          |              |      |  |
|               | Queanbeyan              | East Queanbeyan    |   | 574                 | 5%                                  | 2.3           |   | 223                           | 46.7 | 22%  |                              |      |      |                                    |          |              |      |  |
| 17            | Queanbeyan              | 3 Zones            | 11470                                   | 5060                | 44%                                 |               | 4279  | 273                           | 504  | 27%  |                              |      | 27%  | 0.0                                | RDT44    | 2007         | 136  |  |
|               | Richmond Valley         | Broadwater-Rileys  |   | 282                 | 4%                                  | 2.2           |   | 108                           | 11.1 | 8%   |                              |      |      |                                    |          |              |      | Leak detection/repairs done but no savings<br>Leak detection/repairs done but no savings         |
|               | Richmond Valley         | Woodburn           |   | 303                 | 4%                                  | 1.6           |   | 100                           | 11.1 | 8%   |                              |      |      |                                    |          |              |      |  |
|               | Richmond Valley         | Coraki             |   | 525                 | 8%                                  | 3.6           |   | 96                            | 18.3 | 8%   | 67                           | 12.9 | 5%   | 5.4                                |          |              |      |  |
|               | Richmond Valley         | South Casino       |   | 1494                | 22%                                 | 1.2           |   | 57                            | 31.3 | 5%   | 32                           | 17.4 | 3%   | 13.9                               |          |              |      |  |
|               | Richmond Valley         | Evans Head         |   | 1205                | 18%                                 | 2.5           |   | 91                            | 40.1 | 7%   | 56                           | 24.7 | 4%   | 15.4                               |          |              |      |  |
|               | Richmond Valley         | North Casino       |   | 3051                | 45%                                 | 3.4           |   | 167                           | 186  | 13%  | 126                          | 140  | 10%  | 45.7                               |          |              |      |  |
| 33            | Richmond Valley         | 6 Zones            | 6850                                    | 6860                | 100%                                |               | 3180  | 119                           | 297  | 9%   |                              |      | 7%   | 80.4                               | L92      | 2011         | 138  |  |
|               | Riverina Water          | Lockhart           |   | 480                 | 2%                                  | 3.9           |   | 122                           | 21.3 | 8%   |                              |      |      |                                    |          |              |      | No savings achieved from leak repairs?   |
|               | Riverina Water          | Henty              |   | 525                 | 2%                                  | 0.8           |   | 46                            | 8.8  | 3%   |                              |      |      |                                    |          |              |      |  |
|               | Riverina Water          | Morven             |   | 35                  | 0%                                  | 0.9           |   | 791                           | 10.1 | 55%  |                              |      |      |                                    |          |              |      |  |
|               | Riverina Water          | Uranquinty         |   | 308                 | 1%                                  | 0.6           |   | 87                            | 9.8  | 6%   |                              |      |      |                                    |          |              |      |  |
|               | Riverina Water          | Boree Creek        |   | 54                  | 0%                                  | 6.3           |   | 167                           | 3.3  | 12%  | 56                           | 1.1  | 4%   | 2.2                                |          |              |      |  |
|               | Riverina Water          | Oakland            |   | 171                 | 1%                                  | 4.2           |   | 181                           | 11.3 | 13%  | 55                           | 3.4  | 4%   | 7.9                                |          |              |      |  |
|               | Riverina Water          | Walla Walla        |   | 263                 | 1%                                  | 2.7           |   | 74                            | 7.1  | 5%   | 13                           | 1.2  | 1%   | 5.9                                |          |              |      |  |
|               | Riverina Water          | Gregadoo           |   | 278                 | 1%                                  | 1.8           |   | 208                           | 21.1 | 14%  | 161                          | 16.3 | 11%  | 4.8                                |          |              |      |  |
| 8             | Riverina Water          | 8 Zones            | 30110                                   | 2114                | 7%                                  |               | 15853   | 120                           | 92.8 | 8%   |                              |      | 6%   | 20.8                               | Z4, L3   | 2011         | 140  |  |

Table 10A: Estimated Real Water Losses from Regional NSW Water Loss Management Program

| WATER UTILITY |               | Zone                       | Utility Connections<br>2009-10<br>(No.) | Zone<br>Connections | Connection<br>Ratio<br>Zone:Utility | ILI<br>Before | Utility Potable<br>Annual Water<br>Supplied (ML)<br>2009-10<br>W11.1 | Estimated Water Loss - Before |        |      | Estimated Water Loss - After |       |      | Annual<br>Water<br>Savings<br>(ML) | Test     | Test<br>Year | Page | Comments<br>(MNF refers to Minimum Night Flow) |
|---------------|---------------|----------------------------|---|---------------------|-------------------------------------|---------------|--|-------------------------------|--------|------|------------------------------|-------|------|------------------------------------|----------|--------------|------|--|
|               |               |                            |   |                     |                                     |               |  | (L/c/d)                       | (ML)   | (%)  | (L/c/d)                      | (ML)  | (%)  |                                    |          |              |      |  |
|               |               |                            |   |                     |                                     |               |  | (8)<br>A10                    | (9)    | (10) | (11)<br>A10                  | (12)  | (13) |                                    |          |              |      |  |
| (1)           |               | (2)                        | (3)                                     | (4)                 | (5)                                 | (6)<br>A9     | (7)  |                               |        |      |                              |       |      | (14)                               | (15)     | (16)         | (17) | (18)   |
| 3             | Shoalhaven    | Berry                      |   | 899                 | 2%                                  | 3.4           |  | 356                           | 117    | 46%  | 221                          | 72.5  | 29%  | 44.2                               |          | 2008         |      |  |
|               | Shoalhaven    | Shoalhaven Heads           |   | 1287                | 3%                                  | 2.9           |  | 143                           | 67.1   | 18%  | 59                           | 27.7  | 8%   | 39.4                               |          | 2008         |      |  |
|               | Shoalhaven    | FM 23 (Nowra)              |   | 1919                | 4%                                  | 1.5           |  | 122                           | 85.2   | 16%  | 58                           | 40.4  | 7%   | 44.8                               |          | 2010         |      |  |
|               | Shoalhaven    | FM 14 (Nowra CBD/Manildra) |   | 2807                | 6%                                  | 4.7           |  | 390                           | 400    | 50%  | 326                          | 334   | 42%  | 66.2                               |          | 2010         |      |  |
|               | Shoalhaven    | 4 Zones                    | 45670                                   | 6912                | 15%                                 |               | 12902  | 265                           | 669    | 34%  |                              |       | 24%  | 195                                | L15      | 2010         | 144  |  |
| 52            | Snowy River   | High Level                 |   | 940                 | 34%                                 | 1.7           |  | 110                           | 37.8   | 13%  |                              |       |      | 22.0                               |          |              |      |  |
|               | Snowy River   | Berridale                  |   | 541                 | 20%                                 | 2.5           |  | 173                           | 34.2   | 21%  | 62                           | 12.2  | 7%   | 22.0                               |          |              |      |  |
|               | Snowy River   | Jindabyne Low Level        |   | 245                 | 9%                                  | 17.3          |  | 1230                          | 110    | 146% | 172                          | 15.4  | 20%  | 94.6                               |          |              |      |  |
|               | Snowy River   | 3 Zones                    | 2750                                    | 1726                | 63%                                 |               | 846  | 289                           | 182    | 34%  |                              |       | 12%  | 117                                | L29, RDT | 2011         | 146  | Big leak found                                 |
| 13            | Tamworth      | Barraba                    |   | 1004                | 5%                                  | 2.2           |  | 86                            | 31.6   | 7%   |                              |       |      | 36.6                               |          |              |      |  |
|               | Tamworth      | Manilla                    |   | 1339                | 7%                                  | 3.6           |  | 164                           | 80.1   | 12%  | 89                           | 43.5  | 7%   | 36.6                               |          |              |      |  |
| 68            | Tamworth      | 2 Zones                    | 19430                                   | 2343                | 12%                                 |               | 9354   | 131                           | 112    | 10%  |                              |       | 7%   | 36.6                               | Z5, L7   | 2011         | 148  |  |
|               | Tenterfield   |                            | 2050                                    | 1740                | 85%                                 | 1.7           | 418  | 90                            | 56.9   | 16%  | 35                           | 21.9  | 6%   | 35.0                               | L85      | 2010         | 150  |  |
| 93            | Tumbarumba    | Tumbarumba                 | 1100                                    | 800                 | 73%                                 | 0.7           | 302  | 87                            | 25.3   | 12%  |                              |       |      |                                    | Z73      | 2009         | 152  |  |
| 43            | Tumut         | Brungle                    |   | 47                  | 1%                                  | NA            |  | 0                             | 0.0    | 0%   |                              |       |      |                                    |          |              |      | MNF is zero, ILI calc not possible             |
|               | Tumut         | HL                         |   | 150                 | 3%                                  | 0.6           |  | 44                            | 2.4    | 6%   |                              |       |      |                                    |          |              |      | MNF is zero, ILI calc not possible             |
|               | Tumut         | Talbingo                   |   | 320                 | 7%                                  | NA            |  | 0                             | 0.0    | 0%   |                              |       |      |                                    |          |              |      |  |
|               | Tumut         | Adelong                    |   | 450                 | 9%                                  | 0.6           |  | 43                            | 7.1    | 6%   |                              |       |      |                                    |          |              |      |  |
|               | Tumut         | Tumut LL                   |   | 762                 | 16%                                 | 2.1           |  | 131                           | 36.3   | 18%  | 108                          | 30.0  | 15%  | 6.3                                |          |              |      |  |
|               | Tumut         | Batlow LL                  |   | 447                 | 9%                                  | 2.4           |  | 153                           | 25.0   | 21%  | 105                          | 17.2  | 14%  | 7.8                                |          |              |      |  |
|               | Tumut         | Tumut ML                   |   | 2071                | 42%                                 | 1.1           |  | 71                            | 53.3   | 10%  | 37                           | 28.1  | 5%   | 25.2                               |          |              |      |  |
|               | Tumut         | 7 Zones                    | 4900                                    | 4247                | 87%                                 |               | 1302   | 80                            | 124    | 11%  |                              |       | 8%   | 39.3                               | L67      | 2011         | 154  |  |
| 6             | Tweed         | Hartigans Hill             |   | 740                 | 3%                                  | 0.3           |  | 13                            | 3.6    | 1%   |                              |       |      |                                    |          |              |      | No significant leakage, no project undertaken  |
|               | Tweed         | Walmsleys                  |   | 1807                | 8%                                  | 0.9           |  | 41                            | 26.8   | 4%   |                              |       |      |                                    |          |              |      | No significant leakage, no project undertaken  |
|               | Tweed         | Razorback                  |   | 2107                | 9%                                  | 2.7           |  | 174                           | 134    | 16%  | 115                          | 88.2  | 10%  | 45.6                               |          |              |      |  |
|               | Tweed         | Cudgen High Level          |   | 100                 | 0%                                  | 26.3          |  | 2260                          | 82.5   | 204% | 200                          | 7.3   | 18%  | 75.2                               |          |              |      | Big leak found                                 |
| 45            | Tweed         | 4 Zones                    | 23880                                   | 4754                | 20%                                 |               | 9674   | 142                           | 247    | 13%  |                              |       | 7%   | 121                                | L9, RDT  | 2010         | 156  |  |
|               | Upper Hunter  | Scone                      | 3900                                    | 2031                | 52%                                 | 1.8           | 2910   | 121                           | 89.6   | 6%   |                              |       |      |                                    | Z52      | 2009         | 158  | Project not completed                          |
| 85            | Uralla        | Uralla                     | 1160                                    | 1308                | 100%                                | 1.8           | 300  | 94                            | 45.0   | 15%  | 18                           | 8.8   | 3%   | 36.2                               | L100     | 2011         | 162  |  |
| 98            | Walcha        | Walcha                     | 930                                     | 880                 | 95%                                 | 0.8           | 213  | 68                            | 21.9   | 11%  |                              |       |      |                                    | RDT95    | 2009         | 164  | No significant leakage                         |
| 96            | Warren        | Warren                     | 1000                                    | 944                 | 94%                                 | 7.2           | 385  | 139                           | 47.9   | 13%  | 51                           | 17.7  | 5%   | 30.3                               | L94      | 2011         | 166  |  |
| 57            | Wellington    | Wellington                 | 3080                                    | 2800                | 91%                                 | 2.6           | 1184   | 180                           | 184    | 17%  | 69                           | 70.4  | 7%   | 114                                | L91      | 2010         | 168  |  |
| 16            | Wingecarribee | Kimberley                  |   | 72                  | 0%                                  | 0.5           |  | 61                            | 1.6    | 8%   |                              |       |      |                                    |          |              |      |  |
|               | Wingecarribee | Old Berrima                |   | 171                 | 1%                                  | 0.9           |  | 66                            | 4.1    | 8%   |                              |       |      |                                    |          |              |      |  |
|               | Wingecarribee | New Berrima                |   | 271                 | 2%                                  | 0.4           |  | 27                            | 2.7    | 4%   |                              |       |      |                                    |          |              |      |  |
|               | Wingecarribee | Bundanoon                  |   | 1241                | 7%                                  | 0.6           |  | 36                            | 16.1   | 5%   |                              |       |      |                                    |          |              |      |  |
|               | Wingecarribee | Mt Gil HL                  |   | 201                 | 1%                                  | 3.1           |  | 327                           | 24.0   | 42%  | 70                           | 5.1   | 9%   | 18.9                               |          |              |      |  |
|               | Wingecarribee | Reservoir St               |   | 84                  | 0%                                  | 8.1           |  | 564                           | 17.3   | 73%  | 444                          | 13.6  | 57%  | 3.7                                |          |              |      |  |
|               | Wingecarribee | Spencer St                 |   | 860                 | 5%                                  | 1.5           |  | 108                           | 33.8   | 14%  | 57                           | 18.0  | 7%   | 15.8                               |          |              |      |  |
|               | Wingecarribee | Burrawang                  |   | 840                 | 5%                                  | 3.1           |  | 303                           | 93.0   | 39%  | 116                          | 35.6  | 15%  | 57.4                               |          |              |      |  |
| 2             | Wingecarribee | 8 Zones                    | 16920                                   | 3740                | 22%                                 |               | 4789   | 141                           | 193    | 18%  |                              |       | 9%   | 95.8                               | Z10, L12 | 2010         | 170  |  |
|               | Wyong         | Gwandalan                  | 57050                                   | 2666                | 5%                                  | 7.9           | 12960  | 406                           | 395    | 65%  |                              |       |      |                                    | Z5       |              | 172  | Project not undertaken                         |
|               | Wyong*        | Warnervale trunk main      |   | 1                   | 6.9                                 |               |  | 26400                         | 9.6    |      | 7300                         | 2.7   |      | 7.0                                |          |              |      | Trunk Main - Single connection                 |
| 56            | Yass Valley   | O'Connel A                 |   | 320                 | 11%                                 | 0.5           |  | 33                            | 3.9    | 4%   |                              |       |      |                                    |          |              |      |  |
|               | Yass Valley   | O'Connel B                 |   | 140                 | 5%                                  | 1.9           |  | 174                           | 8.9    | 22%  |                              |       |      |                                    |          |              |      |  |
|               | Yass Valley   | Yass LL                    |   | 1977                | 67%                                 | 0.4           |  | 23                            | 16.3   | 3%   |                              |       |      |                                    |          |              |      |  |
|               | Yass Valley   | Moreton LL                 |   | 350                 | 12%                                 | 1.9           |  | 125                           | 16.0   | 16%  |                              |       |      |                                    |          |              |      |  |
| 49            | Yass Valley   | 4 Zones                    | 2950                                    | 2787                | 94%                                 |               | 838  | 44                            | 45.1   | 6%   |                              |       | 6%   | 0.0                                | RDT94    | 2009         | 174  |  |
|               | Young         | Young                      | 3960                                    | 3180                | 80%                                 | 1.5           | 1523   | 89                            | 104    | 8%   | 34                           | 39.2  | 3%   | 64.5                               | L80      | 2011         | 176  |  |
| Totals        |               |                            | 644,800                                 | 238,500             | 37%                                 |               | 224,600  | 154                           | 13,400 | 16%  | 92                           | 8,000 | 10%  | 5,500                              | 68 LWUs  |              |      |  |

Table 10A: Estimated Real Water Losses from Regional NSW Water Loss Management Program

Notes

- 1. The estimated real water losses in Table 10A are from the Water Loss Management Program (WLMP) for Regional NSW Water Utilities – Final Progress and Evaluation Report 2006-2011, Australian Government, NSW Water Directorate and Local Government and Shires Associations of NSW.
- 2. Columns 1, 2, 4, 6, 8 and 18 of Table 10A have been obtained from Appendices 3 and 4 of the above WLMP Report. Columns 11, 14 and 15 have been obtained from Appendix 4 of the Report. Column 17 has been obtained from Appendix 1 of the Report. Columns 3 and 7 have been obtained from Table 9 (Column 18a) and Table 8 (Column 10) of the *2009-10 NSW Water Supply and Sewerage Benchmarking Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Columns 5, 9, 10, 12 and 13 have been calculated as indicated in Note 6 below. Columns 15 and 16 show the type, the extent of leakage testing (Note 8 below) carried out by each utility and the year of testing and have been determined from Appendices 1, 3 and 4 of the WLMR Report and Column 5.

Eg. for Clarence Valley, Column 15 indicates leakage detection and repair (L) was carried out for 3 zones covering 61% of the utility's service connections (calculated from columns 3 and 4 -  $[(1629 + 3613 + 7878) / 21430 = 61\%]$  and is shown as L61) and that zoning and district metering was carried out for a zone covering 5% of the connections (shown as Z5) – Column 15 thus shows L61, Z5 for Clarence Valley, resulting in a coverage of 67% (column 3). Similarly, for Coffs Harbour, the testing carried out is shown in column 15 as Z77 and L13, and the overall estimated water loss is shown as 5% in column 13. This is calculated as the values in column 9 for the first 8 Zones plus the value in column 12 for Zone 9, divided by the product of the totals in columns 7 and 5, ie.  $(12.9 + 30.3 + 143.2 + 75.9 + 8.1 + 1.0 + 5.9 + 16.7 + 17.9) / (6273 \times 0.91) = 5.4\%$ .

- 3. Column 15 shows that leakage testing has been carried out for a total of 68 utilities. The estimated total annual water loss (ML) from the 110 zones where water loss management was undertaken (ie. leakage detection and repair and/or pressure reduction), eg. the Kentucky St zone for Armidale, is shown in Column 12. The estimated water losses **after** leakage detection and repair, as a percentage of the annual potable water supplied are shown in Column 13. The estimated water losses **before** leakage detection and repair are shown in columns 8 to 10. Note that columns 8 to 10 show the estimated water losses for 75 zones for a total of 27 water utilities, for which leakage detection and repair was not undertaken, mostly because it was not warranted as the magnitude of the identified water losses was small, eg. 8 such zones are reported above for Coffs Harbour, each with losses of 1% to 12% (column 10). However, also included are some zones with high leakage levels where a leakage reduction project was not undertaken, eg. Bega - Pambula South and Pambula Beach due to high project costs and Brewarrina due to lack of resources.

Taking the Kentucky Street zone in Armidale as an example, the table shows that the leakage was 136 L/c/d, 19.9ML and 15% of the potable water supplied (columns 8 to 10 above) before undertaking water loss management and that the leakage was reduced to 65L/c/d, 9.5ML and 7% of the potable meter supplied (columns 11 to 13) after completion of leakage detection and repair. Similarly, the final row of this table shows that overall leakage for the zones examined for the 68 utilities was 154L/c/d, 13,400ML and 16% of the potable water supplied (columns 8 to 10) before undertaking water loss management and that the leakage was reduced to 92L/c/d, 8,000ML and 10% of the potable water supplied (columns 11 to 13) after completion of leakage detection and repair and/or pressure reduction. The total water saving was 5,500ML (with rounding, column 14).

- 4. Harden (3 Zones) and Tumbarumba (2 Zones) obtained a Minimum Night Flow (MNF) of zero. The water loss for these zones has therefore been shown as "0" in columns 8 to 10 above.
- 5. Results shown in columns 4, 8, 11 and 14 to 18 for Kempsey are from page 94 of Appendix 1 of the WLMR. Volumes for the other columns have been calculated by DPI Water in accordance with Note 6 below.
- 6. Calculations for columns:  $(10) = [(9) \times 100] / (7)$ .  $(13) = [(11) \times 100] / (7)$ .  $(9) = (8) \times (3) \times 365 / 10^6$ .  $(12) = (11) \times (3) \times 365 / 10^6$ .  $(5) = [(4) \times 100] / (3)$ .
- 7. Minor discrepancies in the number of service connections between columns 3 and 4 have been corrected in column 5 for Deniliquin, Kempsey, Murray and Uralla.
- 8. The following acronyms are used in the tables: Reservoir Drop Test (RDT#), Waste Metering (WM#), Night Flow Metering (NF#), Zoning and Flow Metering (Z#), Leakage Detection and Repair (L#), Pressure Reduction (P), where # is the percentage of service connections covered.  
Eg. L95 for Gwydir indicates that the leakage detection and repair project carried out covered 95% of the utility's service connections.
- 9. It is noted that only 9 LWUs in Table 10A have reported leakage of over 12%. 3 of these utilities, which have not carried out leakage detection and repair reported the following leakage results: Brewarrina (34% - project not undertaken); MidCoast Water (16% - pressure management only undertaken at Hawks Nest); and Queanbeyan (27% - project not undertaken). 6 utilities had leakage of over 12% following completion of their water loss management projects: Bogan - Leakage reduced from 38% to 24% of potable water supplied (99% of connections covered); Clarence Valley - Leakage reduced from 27% to 15% of potable water supplied (67% of connections covered); Cootamundra - Leakage reduced from 21% to 13% of potable water supplied (93% of connections covered); Kempsey - Leakage reduced from 17% to 16% of potable water supplied (100% of connections covered); Port Macquarie-Hastings - Leakage reduced from 20% to 14% of potable water supplied (6% of connections covered); and Shoalhaven - Leakage reduced from 34% to 24% of potable water supplied (16% of connections covered).
- 10. 30% coverage is considered to be the minimum coverage needed to adequately characterise a utility's leakage performance. Caution is therefore warranted in interpreting the results reported above for the following 17 utilities which have tested zones covering under 30% of their service connections: Armidale (5% of service connections); Ballina (7%); Bathurst (5%); Byron (17%); Essential Water (18%); Gosford (1%); MidCoast Water (7%); Muswellbrook (12%); Narrabri (18%); Parkes (26%); Port Macquarie-Hastings (6%); Riverina Water (7%); Shoalhaven (18%); Tamworth (12%); Tweed (20%); Wingecarribee (22%); and Wyong (5%). The reported leakage results accepted as a valid indicator of the utility's performance by DPI Water are shown in column 41e of Table 10. Refer also to Note 1 of Table 10 on page 172.



Table 11: Water supply - financial and efficiency

| WATER UTILITY                 |   | WATER SUPPLY FINANCIAL (SEE ALSO COST RECOVERY TABLE 6) |             |                      |                     |             |                            |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   |  | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 6) |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |
|-------------------------------|---|---|-------------|----------------------|---------------------|-------------|----------------------------|---|--------------------------------|------------------------|-----------------------------|--------------------------------|-------|----------------------|-------|---------------------------|-------|------------------|---------------|-------------------|--|---|-----------------|---------------|-----------------------------------|---------------|-------|-------|----------------------|-------|-------|-------|-----------------|-------|-----|-----|-----|
|                               |   | Total Revenue Water<br>(excl. Capital Works Grants)     |             | Revenue per property | Residential Revenue |             |                            | Current Replacement Cost of System Assets (CRC)           |                                |                        | Net Debt to Equity WS & Sge |                                |       | WDV CRC per Property | ERRR  |                           |       | Return on Assets |               |                   | Operating Result                       |   | Cross Subsidies |               | Externalities (Fees to Water NSW) | Loan Payment  |       |       | Operating Cost (OMA) |       |       |       | Management Cost |       |     |     |     |
|                               |   |   |             |                      |                     |             |                            |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   |  |   |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |
|                               |   |   |             |                      | (\$'000)            | (\$)        | Percent of rates & charges | Res Water Supplied (% of water supplied excluding losses) | Percent from Usage Charges (%) | Written Down CRC (\$M) | CRC (\$M)                   | CRC per Assessment (\$/assmnt) | (%)   | (\$/prop)            | (%)   | see also Table 6 Col (12) | (%)   | (%)              | (%)           | (\$/property)     | Annual Fees & Charges (\$/assess ment) | Developer Charge (\$/ET)                    | (\$/property)   | (\$/property) | (\$/property)                     | (\$/property) |       |       |                      |       |       |       |                 |       |     |     |     |
|                               |   | (57)<br>F1  | (57a)<br>F5 | (58)                 | (59)                | (58a)<br>F4 | (60)<br>F9                 | (61)  | (62)                           | (63)<br>F22            | (62a)<br>F9/C4              | (63a)<br>F17                   | (63b) | (65)                 | (64a) | (64b)                     | (66)  | (66a)            | (67)<br>F11** | (68) <sup>+</sup> |  |   |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |
| 13/14                         | 14/15                                     | 14/15   | 14/15       | 14/15                | 14/15               | 14/15       | 14/15                      | 14/15   | 12/13                          | 13/14                  | 14/15                       | 14/15                          | 12/13 | 13/14                | 14/15 | 12/13                     | 13/14 | 14/15            | 13/14         | 14/15             | 14/15                                  | 14/15                                       | 14/15           | 12/13         | 13/14                             | 14/15         | 11/12 | 12/13 | 13/14                | 14/15 | 11/12 | 12/13 | 13/14           | 14/15 |     |     |     |
| Sydney Water                  | 1,300,000                                 | 1,320,000   | 705         |                      |                     | 80          | 12,400                     |   |                                | 100                    | 96                          | 98                             | 6600  | 1.9                  | 1.9   | 2.3                       |       |                  |               |                   |  |   |                 |               |                                   |               |       | 365   | 408                  | 408   | 386   |       |                 |       |     |     |     |
| Hunter Water                  | 147,000                                   | 140,000   | 588         |                      |                     | 95          | 2,420                      |   |                                | 75                     | 78                          | 81                             | 10000 | 2.8                  | 3.5   | 2.5                       |       |                  |               |                   |  |   |                 |               |                                   |               |       | 240   | 244                  | 233   | 270   |       |                 |       |     |     |     |
| Water NSW                     | 209,000                                   | 205,000   |             |                      |                     |             |                            |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   |  |   |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |
| LWUs with > 10,000 Properties |   |   |             |                      |                     |             |                            |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   |  |   |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |
| 1                             | Gosford                                   | 44,400  | 45,600      | 635                  | 87                  | 81          | 73                         | 551   | 952                            | 14,000                 | 5                           | 6                              | 6     | 7,670                | 0.7   | 0.8                       | 1.3   | -0.2             | 0.0           | 0.4               | 6                                      | 36  |                 |               |                                   | 4.3           | 109   | 117   | 466                  | 344   | 373   | 367   | 331             | 130   | 133 | 122 | 109 |
| 2                             | Wyong                                     | 48,400  | 52,400      | 825                  | 90                  | 74          | 67*                        | 956   | 1471                           | 22,500                 | 10                          | 9                              | 9     | 15,100               | 1.2   | 1.4                       | 1.5   | -0.2             | 0.0           | 0.4               | -47                                    | -1  |                 |               |                                   | 2.2           | 355   | 367   | 353                  | 319   | 319   | 319   | 319             | 146   | 80  | 95  | 103 |
| 3                             | Shoalhaven                                | 23,200  | 26,800      | 568                  | 68                  | 62          | 75*                        | 357   | 621                            | 12,100                 | 1                           | 0                              | -1    | 7,570                | 1.2   | 0.9                       | 1.7   | 2.0              | 1.6           | 2.3               | 119                                    | 158   |                 |               |                                   | 1.9           | 10    | 11    | 6                    | 280   | 281   | 274   | 276             | 133   | 139 | 131 | 129 |
| 4                             | Rous (Bulk Supplier) (NO SGE)             | 22,500  | 23,000      |                      |                     |             |                            | 326   | 465                            |                        | 6                           | 4                              | 5     |                      | 1.1   | 1.7                       | 1.8   | 0.8              | 1.2           | 1.3               | 40                                     | 61  |                 |               |                                   | 4.5           | 89    | 87    | 98                   | 192   | 234   | 238   | 268             | 93    | 109 | 104 | 123 |
| 5                             | MidCoast                                  | 30,600  | 31,200      | 806                  | 69                  | 69          | 72                         | 436   | 684                            | 17,000                 | 25                          | 23                             | 22    | 11,300               | 0.1   | 0.7                       | 0.7   | -1.5             | -0.7          | -0.9              | -187                                   | -148  |                 |               |                                   | 1.7           | 301   | 295   | 809                  | 484   | 429   | 411   | 477             | 113   | 110 | 99  | 126 |
| 6                             | Tweed                                     | 32,400  | 28,800      | 893                  | 75                  | 73          | 75*                        | 495   | 661                            | 18,700                 | 3                           | 2                              | 0     | 15,400               | 0.6   | 2.4                       | 1.6   | -0.2             | 1.7           | 0.9               | 212                                    | 104   |                 |               |                                   | 6.9           | 184   | 182   | 180                  | 393   | 429   | 423   | 419             | 171   | 186 | 176 | 185 |
| 7                             | Port Macquarie-Hastings (Unfiltered)      | 30,200  | 26,700      | 878                  | 69                  | 76          | 68                         | 348   | 573                            | 17,900                 | -4                          | -5                             | -8    | 11,400               | -0.5  | 1.7                       | 1.2   | -0.2             | 1.8           | 1.6               | 172                                    | 142   |                 |               |                                   | 6.2           | 87    | 86    | 84                   | 336   | 365   | 386   | 398             | 120   | 132 | 150 | 153 |
| 8                             | Riverina (Groundwater) (NO SGE)           | 27,300  | 30,500      | 1,021                | 71                  | 61          | 74                         | 203   | 358                            | 11,500                 | -4                          | -7                             | -9    | 6,810                | 3.5   | 5.3                       | 7.5   | 3.6              | 5.6           | 7.9               | 235                                    | 376   |                 |               |                                   | 2.9           | 11    | 33    | 30                   | 318   | 384   | 338   | 271             | 106   | 152 | 122 | 72  |
| 10                            | Coffs Harbour                             | 20,200  | 22,100      | 882                  | 76                  | 75          | 76*                        | 286   | 423                            | 15,900                 | 15                          | 14                             | 13    | 11,400               | 1.8   | 1.2                       | 2.0   | 0.6              | -0.2          | 0.6               | -43                                    | 58  |                 |               |                                   | 2.6           | 526   | 523   | 454                  | 337   | 388   | 396   | 395             | 130   | 139 | 144 | 153 |
| 11                            | Albury City                               | 16,400  | 16,800      | 654                  | 64                  | 73          | 75                         | 207   | 398                            | 15,900                 | 1                           | -2                             | -6.0  | 8,060                | 0.7   | 1.7                       | 1.9   | 0.8              | 1.9           | 2.2               | 165                                    | 121   |                 |               |                                   | 2.8           | 0     | 0     | 0                    | 293   | 328   | 306   | 277             | 109   | 112 | 112 | 91  |
| 12                            | Fish River WS (Unfiltered, Bulk Supplier) | 10,000  | 10,000      |                      |                     |             |                            | 35  | 255                            |                        | 0                           | 0                              |       |                      | 10.9  | 15.6                      |       | 10.9             | 15.6          |                   | 191                                    |   |                 |               |                                   |               | 0     |       |                      | 164   | 192   | 143   |                 | 56    | 66  | 43  | 0   |
| 13                            | Tamworth Regional                         | 22,600  | 20,100      | 927                  | 63                  | 52          | 55                         | 210   | 365                            | 16,800                 | -2                          | -2                             | -4    | 9,690                | 1.5   | 3.3                       | 2.0   | 1.9              | 3.6           | 2.3               | 366                                    | 68  |                 |               |                                   | 17.7          | 50    | 44    | 58                   | 504   | 517   | 536   | 518             | 180   | 171 | 198 | 201 |
| 14                            | Clarence Valley                           | 14,400  | 14,900      | 694                  | 68                  | 62          | 66                         | 400   | 456                            | 20,800                 | 10                          | 10                             | 11    | 18,600               | -0.1  | 0.7                       | 0.4   | -0.5             | 0.2           | -0.1              | 31                                     | -62   |                 |               |                                   | 0.2           | 156   | 137   | 128                  | 354   | 380   | 380   | 388             | 143   | 155 | 157 | 168 |
| 15                            | Eurobodalla                               | 15,500  | 17,000      | 868                  | 84                  | 77          | 58                         | 278   | 418                            | 20,100                 | 2                           | 1                              | -1    | 14,200               | -0.3  | 0.4                       | 1.1   | -0.5             | 0.3           | 1.0               | 29                                     | 92  |                 |               |                                   | 1.4           | 66    | 64    | 356                  | 429   | 391   | 423   | 405             | 158   | 162 | 210 | 206 |
| 16                            | Wingecarribee                             | 13,500  | 13,200      | 689                  | 76                  | 77          | 68                         | 169   | 284                            | 14,100                 | 0                           | -1                             | -4    | 8,820                | 0.7   | 1.8                       | 1.5   | 0.9              | 2.1           | 1.8               | 180                                    | 132   |                 |               |                                   | 0.3           | 21    | 20    | 20                   | 322   | 348   | 375   | 371             | 141   | 135 | 139 | 143 |
| 17                            | Queanbeyan (Reticulator)                  | 18,900  | 19,100      | 1,101                | 90                  | 82          | 61                         | 95  | 163                            | 9,650                  | -17                         | -19                            | -20   | 5,460                | -0.9  | 0.9                       | 0.4   | -0.7             | 1.1           | 0.8               | 65                                     | 42  |                 |               |                                   | 0.07          | 0     | 0     | 0                    | 465   | 498   | 589   | 577             | 150   | 154 | 189 | 201 |
| 18                            | Dubbo                                     | 17,800  | 20,600      | 1,171                | 75                  | 67          | 74                         | 170   | 223                            | 14,100                 | 0                           | -4                             | -3    | 9,650                | 2.9   | 3.3                       | 5.0   | 2.1              | 2.6           | 4.4               | 204                                    | 392   |                 |               |                                   | 8.9           | 107   | 106   | 104                  | 379   | 457   | 504   | 482             | 161   | 169 | 159 | 160 |
| 19                            | Orange                                    | 15,600  | 17,600      | 1,005                | 90                  | 71          | 70                         | 220   | 333                            | 19,000                 | -13                         | -14                            | -12   | 12,500               | 3.7   | 2.9                       | 4.0   | 4.3              | 3.3           | 4.4               | 284                                    | 436   |                 |               |                                   | 4.1           | 59    | 55    | 56                   | 316   | 345   | 383   | 339             | 127   | 139 | 141 | 144 |
| 20                            | Goulburn Mulwaree                         | 10,100  | 10,100      | 903                  | 72                  | 63          | 65*                        | 211   | 300                            | 27,700                 | -2                          | -5                             | -6    | 18,900               | 1.0   | 1.0                       | 0.8   | 0.6              | 0.7           | 0.4               | 119                                    | 45  |                 |               |                                   | 1.5           | 180   | 172   | 160                  | 384   | 407   | 418   | 426             | 120   | 127 | 115 | 149 |
| 21                            | Bathurst Regional                         | 14,800  | 15,200      | 967                  | 62                  | 60          | 82                         | 163   | 295                            | 19,700                 | -11                         | -12                            | -12   | 10,400               | 0.9   | 1.8                       | 1.6   | 1.1              | 2.0           | 1.7               | 175                                    | 126   |                 |               |                                   | 8.1           | 0     | 0     | 0                    | 426   | 510   | 532   | 545             | 125   | 124 | 154 | 143 |
| 22                            | Lismore (Reticulator)                     | 10,800  | 11,800      | 824                  | 74                  | 68          | 70                         | 75  | 128                            | 9,370                  | -1                          | -1                             | -2.2  | 5,250                | -0.9  | 0.2                       | 1.6   | -0.8             | -0.1          | 1.3               | -35                                    | 38  | 9               |               |                                   | 0.2           | 29    | 45    | 48                   | 416   | 481   | 495   | 493             | 109   | 112 | 127 | 111 |
| 23                            | Bega Valley (Unfiltered)                  | 10,300  | 9,990       | 696                  | 80                  | 71          | 65*                        | 191   | 308                            | 21,000                 | -2                          | -3                             | -3    | 13,300               | -1.4  | -0.6                      | -0.8  | -1.1             | -0.3          | -0.5              | -41                                    | -68   |                 |               |                                   | 3.5           | 0     | 0     | 0                    | 550   | 520   | 506   | 543             | 181   | 236 | 265 | 298 |
| 24                            | Ballina (Reticulator)                     | 11,300  | 11,600      | 808                  | 75                  | 81          | 66                         | 69  | 112                            | 7,280                  | 8                           | 11                             | 17    | 4,790                | -0.7  | 0.3                       | 1.2   | -0.2             | 0.7           | 1.8               | 41                                     | 82  |                 |               |                                   | 0.7           | 0     | 0     | 0                    | 384   | 515   | 510   | 494             | 129   | 159 | 150 | 152 |
| 25                            | Kempsey (Groundwater)                     | 9,900   | 12,500      | 999                  | 64                  | 58          | 59                         | 192   | 267                            | 22,200                 | 8                           | 8                              | 8     | 15,300               | 0.3   | 0.0                       | 1.3   | -0.3             | -0.8          | 0.7               | -162                                   | 43  |                 |               |                                   | 7.1           | 196   | 248   | 237                  | 411   | 433   | 481   | 477             | 164   | 170 | 188 | 182 |
| 26                            | Essential Energy                          | 15,000  | 14,600      | 1,387                | 52                  | 58          | 59                         |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   | -266                                   | -238  |                 |               |                                   |               | 0     | 0     | 0                    | 1247  | 1139  | 1281  | 1025            | 257   | 96  | 66  | 134 |
| 27                            | Byron (Reticulator)                       | 8,780   | 8,880       | 791                  | 70                  |             |                            |   |                                |                        |                             |                                |       |                      |       |                           |       |                  |               |                   |  |   |                 |               |                                   |               |       |       |                      |       |       |       |                 |       |     |     |     |

Table 11: Water supply - financial and efficiency

| WATER UTILITY  |                             | WATER SUPPLY FINANCIAL (SEE ALSO COST RECOVERY TABLE 6) |             |  |  |   |                              |  |                                      |             |                                |                                      |       |                         |       |               |  |                                |               |                   |                  | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 6) |                 |                   |   |              |       |       |                      |       |       |       |                 |       |       |       |  |
|--|-----------------------------|---|-------------|--|--|---|------------------------------|--|--------------------------------------|-------------|--------------------------------|--------------------------------------|-------|-------------------------|-------|---------------|--|--------------------------------|---------------|-------------------|------------------|---|-----------------|-------------------|---|--------------|-------|-------|----------------------|-------|-------|-------|-----------------|-------|-------|-------|--|
|  |                             | Total Revenue Water<br>(excl. Capital Works Grants)     |             | Revenue per<br>property                  | Residential Revenue  |   |                              | Current Replacement Cost of<br>System Assets (CRC) |                                      |             | Net Debt to Equity<br>WS & Sge |                                      |       | WDV CRC per<br>Property | ERRR  |               |  | Return on Assets               |               |                   | Operating Result |   | Cross Subsidies |                   | Externalities<br>(Fees to Water<br>NSW) | Loan Payment |       |       | Operating Cost (OMA) |       |       |       | Management Cost |       |       |       |  |
|  |                             |   |             |  |  |   |                              |  |                                      |             |                                |                                      |       |                         |       |               |  |                                |               |                   |                  |   |                 |                   |   |              |       |       |                      |       |       |       |                 |       |       |       |  |
|  |                             | (\$'000)  | (\$)        | Percent of<br>rates &<br>charges<br>(%)* | Res Water<br>Supplied (% of<br>water supplied<br>excluding losses) | Percent from<br>Usage<br>Charges<br>(%) | Written<br>Down CRC<br>(\$M) | CRC<br>(\$M)                                       | CRC per<br>Assessment<br>(\$/assmnt) | (%)         | (\$/prop)                      | (%)<br><br>see also Table 6 Col (12) | (%)   | (%)                     | (%)   | (\$/property) | Annual<br>Fees &<br>Charges<br>(\$/assess<br>ment) | Developer<br>Charge<br>(\$/ET) | (\$/property) | (\$/property)     | (\$/property)    | (\$/property)                               | (67)<br>F11**   | (68) <sup>+</sup> |   |              |       |       |                      |       |       |       |                 |       |       |       |  |
|  |                             | (57)<br>F1  | (57a)<br>F5 | (58)                                     | (59)   | (58a)<br>F4                             | (60)<br>F9                   | (61)   | (62)                                 | (63)<br>F22 | (62a)<br>F9/C4                 | (63a)<br>F17                         | (63b) | (65)                    | (64a) | (64b)         | (66)   | (66a)                          | (67)<br>F11** | (68) <sup>+</sup> |                  |   |                 |                   |   |              |       |       |                      |       |       |       |                 |       |       |       |  |
|  |                             | 13/14   | 14/15       | 14/15                                    | 14/15  | 14/15                                   | 14/15                        | 14/15  | 14/15                                | 14/15       | 12/13                          | 13/14                                | 14/15 | 14/15                   | 12/13 | 13/14         | 14/15  | 12/13                          | 13/14         | 14/15             | 13/14            | 14/15                                       | 14/15           | 14/15             | 14/15                                   | 12/13        | 13/14 | 14/15 | 11/12                | 12/13 | 13/14 | 14/15 | 11/12           | 12/13 | 13/14 | 14/15 |  |
| 37   | Inverell                    | 4,510   | 4,430       | 768                                      | 87   | 59                                      | 45                           | 77   | 101                                  | 17,100      | -6                             | -7                                   | -6    | 13,400                  | 0.5   | 1.0           | 0.8  | 0.7                            | 1.3           | 0.9               | 172              | 115   |                 |                   | 6.6                                     | 62           | 100   | 45    | 539                  | 549   | 547   | 524   | 104             | 60    | 57    | 61    |  |
| 38   | Moree Plains (Groundwater)  | 6,160   | 5,790       | 1,259                                    | 75   | 84                                      | 75*                          | 49   | 81                                   | 17,000      | 7                              | 8                                    | 3     | 10,700                  | 1.4   | 3.9           | 4.1  | 0.2                            | 3.0           | 3.1               | 322              | 328   |                 |                   | 9.2                                     | 154          | 155   | 185   | 615                  | 658   | 707   | 598   | 286             | 231   | 282   | 208   |  |
| 39   | Cowra                       | 5,480   | 6,830       | 1,284                                    | 60   | 54                                      | 79                           | 53   | 127                                  | 22,600      | 5                              | 6                                    | 6     | 9,940                   | 2.5   | 0.1           | 2.0  | 2.2                            | -0.4          | 1.2               | -201             | -33   |                 |                   | 12.0                                    | 51           | 72    | 166   | 629                  | 677   | 722   | 746   | 65              | 49    | 56    | 56    |  |
| 40   | Central Tablelands (NO SGE) | 5,250   | 5,220       | 951                                      | 50   | 50                                      | 69*                          | 53   | 121                                  | 20,900      | -1                             | -4                                   | -6    | 9,630                   | 0.7   | 1.0           | 0.1  | 0.7                            | 0.9           | 0.1               | 52               | 13  |                 |                   | 6.6                                     | 107          | 106   | 106   | 464                  | 565   | 552   | 626   | 248             | 239   | 263   | 252   |  |
| 41   | Muswellbrook                | 5,610   | 4,860       | 836                                      | 67   | 70                                      | 69*                          | 50   | 86                                   | 13,900      | -22                            | -21                                  | -21   | 8,550                   | 2.3   | 0.1           | -0.5   | 3.7                            | 1.9           | 0.8               | 162              | 44  |                 |                   | 11.4                                    | 72           | 71    | 69    | 619                  | 662   | 715   | 626   | 203             | 214   | 248   | 192   |  |
| 42   | Corowa                      | 4,180   | 5,140       | 943                                      | 70   | 50                                      | 82                           | 39   | 58                                   | 9,850       | -7                             | -9                                   | -11   | 7,130                   | 3.5   | 1.7           | 3.6  | 4.1                            | 2.3           | 4.2               | 142              | 239   |                 |                   | 6.6                                     | 0            | 0     | 0     | 420                  | 491   | 479   | 469   | 202             | 221   | 201   | 113   |  |
| 43   | Tumut                       | 3,540   | 3,420       | 760                                      | 63   | 67                                      | 78*                          | 40   | 62                                   | 13,100      | 3                              | 1                                    | -1    | 8,900                   | 1.2   | 1.2           | 0.4  | 0.5                            | -0.4          | 0.0               | -129             | -12   |                 |                   | 3.7                                     | 135          | 248   | 150   | 390                  | 393   | 411   | 467   | 117             | 104   | 101   | 160   |  |
| 44   | Gunnedah (Groundwater)      | 4,260   | 4,320       | 993                                      | 71   | 59                                      | 74*                          | 40   | 66                                   | 15,400      | -20                            | -21                                  | -22   | 9,160                   | 1.6   | 3.6           | 3.3  | 2.6                            | 4.4           | 4.1               | 391              | 283   |                 |                   | 6.6                                     | 0            | 0     | 0     | 397                  | 410   | 429   | 475   | 186             | 154   | 162   | 168   |  |
| 45   | Upper Hunter                | 5,070   | 6,450       | 1,466                                    | 68   | 58                                      | 73*                          | 50   | 76                                   | 15,900      | -9                             | -11                                  | -12   | 11,500                  | 4.8   | 2.0           | 5.1  | 4.9                            | 2.0           | 5.1               | 213              | 585   |                 |                   | 11.7                                    | 82           | 87    | 87    | 481                  | 533   | 720   | 659   | 168             | 185   | 213   | 267   |  |
| 46   | Narrabri (Groundwater)      | 4,560   | 3,630       | 827                                      | 90   | 59                                      | 56                           | 24   | 56                                   | 12,500      | -31                            | -22                                  | -24   | 5,570                   | 8.6   | 6.8           | 2.6  | 13.0                           | 8.7           | 4.2               | 439              | 225   |                 |                   | 8.2                                     | 1            | 0     | 0     | 344                  | 432   | 453   | 480   | 144             | 166   | 192   | 267   |  |
| 47   | Bellingen (Unfiltered)      | 2,870   | 2,200       | 538                                      | 90   | 58                                      | 77                           | 44   | 58                                   | 13,500      | -19                            | -20                                  | -18   | 10,700                  | 0.3   | 1.4           | -0.3   | 1.0                            | 2.3           | 0.9               | 241              | 58  |                 |                   | 2.6                                     | 0            | 0     | 0     | 335                  | 349   | 363   | 391   | 190             | 203   | 186   | 250   |  |
| 48   | Leeton                      | 3,480   | 3,680       | 902                                      | 75   | 64                                      | 66                           | 35   | 72                                   | 16,300      | -20                            | -20                                  | -19   | 8,570                   | 0.7   | -0.4          | 0.4  | 1.5                            | 0.3           | 1.1               | -5               | 27  |                 |                   |   | 4            | 4     | 26    | 531                  | 613   | 632   | 590   | 125             | 142   | 140   | 141   |  |
| 49   | Young (Reticulator)         | 3,140   | 3,770       | 773                                      | 74   | 61                                      | 69                           | 16   | 50                                   | 10,700      | -8                             | 6                                    | 3     | 3,370                   | -1.8  | -2.0          | -0.7   | -1.2                           | -1.8          | -0.2              | -75              | -33   |                 |                   | 0.1                                     | 8            | 8     | 8     | 203                  | 214   | 230   | 254   | 58              | 53    | 63    | 69    |  |
| 50   | Cooma-Monaro                | 3,360   | 3,280       | 894                                      | 69   | 79                                      | 64*                          | 41   | 82                                   | 21,200      | -7                             | -7                                   | -10   | 11,100                  | 0.5   | 0.2           | 0.8  | 0.8                            | 0.5           | 1.1               | 7                | 95  |                 |                   | 6.1                                     | 0            | 0     | 0     | 477                  | 553   | 599   | 540   | 205             | 327   | 266   | 228   |  |
| 51   | Forbes                      | 2,740   | 2,970       | 798                                      | 90   | 64                                      | 66                           | 33   | 73                                   | 19,700      | -14                            | -15                                  | -16   | 8,980                   | -1.1  | -1.7          | -1.6   | -0.1                           | -1.0          | -0.8              | -88              | -73   |                 |                   | 21.1                                    | 0            | 0     | 0     | 479                  | 597   | 623   | 671   | 110             | 179   | 70    | 72    |  |
| 52   | Snowy River (Unfiltered)    | 3,050   | 2,980       | 561                                      | 70   | 76                                      | 41                           | 24   | 50                                   | 13,400      | -4                             | -6                                   | -8    | 4,600                   | 0.3   | 1.1           | 1.0  | 0.6                            | 1.3           | 1.2               | 61               | 60  |                 |                   | 0.9                                     | 27           | 22    | 20    | 360                  | 368   | 340   | 311   | 158             | 162   | 112   | 105   |  |
| 53   | Berrigan (Dual Supply)      | 2,880   | 3,120       | 881                                      | 90   | 67                                      | 40                           | 27   | 43                                   | 12,000      | -13                            | -16                                  | -19   | 7,560                   | 2.4   | 2.6           | 3.2  | 2.7                            | 2.9           | 3.6               | 180              | 231   |                 |                   | 3.7                                     | 9            | 7     | 6     | 450                  | 474   | 455   | 467   | 109             | 112   | 118   | 117   |  |
| 54   | Deniliquin                  | 2,430   | 2,590       | 740                                      | 84   | 86                                      | 55*                          | 38   | 53                                   | 14,400      | -7                             | -10                                  | -8    | 10,800                  | 2.2   | -0.4          | 0.4  | 2.7                            | 0.4           | 1.1               | -16              | 73  |                 |                   | 7.7                                     | 0            | 0     | 0     | 450                  | 507   | 550   | 528   | 223             | 220   | 252   | 230   |  |
| 55   | Warrumbungle                | 2,750   | 2,720       | 822                                      | 79   | 73                                      | 51*                          | 28   | 62                                   | 18,400      | -5                             | -7                                   | -8    | 8,430                   | 0.2   | -0.2          | -1.2   | 0.3                            | 0.1           | -1.1              | -17              | -118  |                 |                   | 5.4                                     | 25           | 23    | 12    | 476                  | 551   | 601   | 673   | 103             | 114   | 143   | 145   |  |
| 56   | Yass Valley                 | 3,480   | 3,750       | 1,154                                    | 90   | 76                                      | 53                           | 42   | 60                                   | 18,200      | 20                             | 21                                   | 18    | 12,900                  | 1.7   | 0.0           | 3.8  | -0.3                           | 0.9           | 1.7               | 65               | 386   |                 |                   | 6.1                                     | 433          | 308   | 290   | 396                  | 596   | 448   | 439   | 172             | 225   | 227   | 218   |  |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                             | 136,320   |             |  |  |   |                              | 15,650   |                                      |             | -6                             | -7                                   | -8    |                         |       | 0.4           | 1.3  | 0.9                            |               |                   | 101              | 105   |                 |                   |   |              |       | 420   | 470                  | 536   | 531   | 151   | 151             | 158   | 165   |       |  |
| LWUs with 1,501 - 3,000 Properties                       |                             |   |             |  |  |   |                              |  |                                      |             |                                |                                      |       |                         |       |               |  |                                |               |                   |                  |   |                 |                   |   |              |       |       |                      |       |       |       |                 |       |       |       |  |
| 57   | Wellington                  | 3,010   | 3,150       | 1,082                                    | 86   | 52                                      | 66                           | 20   | 36                                   | 12,200      | 16                             | 11                                   | 6     | 6,880                   | 4.1   | 4.6           | 5.7  | 2.6                            | 3.3           | 4.6               | 191              | 291   |                 |                   | 9.9                                     | 147          | 146   | 146   | 522                  | 535   | 552   | 522   | 189             | 202   | 203   | 200   |  |
| 58   | Cootamundra (Reticulator)   | 2,270   | 2,270       | 754                                      | 80   | 78                                      | 53*                          | 4  | 15                                   | 5,090       | -13                            | -15                                  | -16   | 1,380                   | 1.9   | 4.3           | -1.6   | 1.9                            | 4.3           | -1.6              | 55               | -31   |                 |                   | 0.11                                    | 0            | 0     | 0     | 240                  | 224   | 227   | 287   | 53              | 54    | 59    | 100   |  |
| 59   | Lachlan                     | 3,030   | 3,430       | 1,208                                    | 90   | 63                                      | 78                           | 55   | 103                                  | 36,800      | -13                            | -13                                  | -14   | 19,300                  | -0.8  | -1.2          | -1.0   | -0.3                           | -0.7          | -0.7              | -128             | -140  |                 |                   | 16.0                                    | 0            | 0     | 0     | 693                  | 791   | 848   | 798   | 142             | 147   | 152   | 160   |  |
| 60   | Glen Innes Severn           | 1,870   | 1,890       | 620                                      | 90   | 74                                      | 52                           | 21   | 37                                   | 11,000      | 4                              | 6                                    | 6     | 6,740                   | 0.7   | 1.2           | 1.2  | 0.0                            | 0.3           | 0.3               | 18               | 6   |                 |                   | 5.2                                     | 108          | 104   | 98    | 421                  | 422   | 412   | 390   | 198             | 188   | 199   | 194   |  |
| 61   | Liverpool Plains            | 2,990   | 2,650       | 960                                      | 90   | 68                                      | 41                           | 41   | 56                                   | 19,800      | -5                             | -7                                   | -8    | 14,800                  | 1.1   | 1.3           | 0.5  | 1.3                            | 1.3           | 0.5               | 204              | 74  |                 |                   | 5.8                                     | 76           | 93    | 135   | 469                  | 491   | 648   | 587   | 189             | 208   | 356   | 257   |  |
| 62</   |                             |   |             |  |  |   |                              |  |                                      |             |                                |                                      |       |                         |       |               |  |                                |               |                   |                  |   |                 |                   |   |              |       |       |                      |       |       |       |                 |       |       |       |  |



Table 11: Water supply - financial and efficiency

| WATER UTILITY   | WATER SUPPLY FINANCIAL (SEE ALSO COST RECOVERY TABLE 6) |                                    |                            |   |  |   |           |                                |                             |        |            |                      |                           |               |                                       |                          |         |       |                  |                      |                 |       |                                   |              | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 6) |                     |                      |       |                 |       |                 |                       |       |       |       |
|---|---|------------------------------------|----------------------------|---|--|---|-----------|--------------------------------|-----------------------------|--------|------------|----------------------|---------------------------|---------------|---------------------------------------|--------------------------|---------|-------|------------------|----------------------|-----------------|-------|-----------------------------------|--------------|---|---------------------|----------------------|-------|-----------------|-------|-----------------|-----------------------|-------|-------|-------|
|   | Total Revenue Water<br>(excl. Capital Works Grants)     | Revenue per property               | Residential Revenue        |   |  | Current Replacement Cost of System Assets (CRC) |           |                                | Net Debt to Equity WS & Sge |        |            | WDV CRC per Property | ERRR                      |               |                                       | Return on Assets         |         |       | Operating Result |                      | Cross Subsidies |       | Externalities (Fees to Water NSW) | Loan Payment |   |                     | Operating Cost (OMA) |       |                 |       | Management Cost |                       |       |       |       |
|   |   |                                    | Percent of rates & charges | Res Water Supplied (% of water supplied excluding losses) | Percent from Usage Charges (%)         | Written Down CRC (\$M)                          | CRC (\$M) | CRC per Assessment (\$/assmnt) |                             |        |            |                      | see also Table 6 Col (12) | (\$/property) | Annual Fees & Charges (\$/assessment) | Developer Charge (\$/ET) |         |       |                  |                      |                 |       |                                   |              |   |                     |                      |       |                 |       |                 |                       |       |       |       |
|   |   |                                    |                            |   |  |   |           |                                | (\$'000)                    | (\$)   | (%)*       |                      |                           |               |                                       |                          | (60) F9 | (61)  | (62)             | (%)                  | (%)             | (%)   |                                   | (63a) F17    | (63b)                                       | (65)                | (64a)                | (64b) | (66)            | (66a) | (67) F11**      | (68) <sup>+</sup>     |       |       |       |
|   |   |                                    |                            |   |  |   |           |                                | 13/14                       | 14/15  | 14/15      |                      |                           |               |                                       |                          | 14/15   | 14/15 | 14/15            | 14/15                | 14/15           | 14/15 |                                   | 12/13        | 13/14                                       | 14/15               | 14/15                | 12/13 | 13/14           | 14/15 | 12/13           | 13/14                 | 14/15 | 13/14 | 14/15 |
| LWUs with 200 - 1,500 Properties                      |   |                                    |                            |   |  |   |           |                                |                             |        |            |                      |                           |               |                                       |                          |         |       |                  |                      |                 |       |                                   |              |   |                     |                      |       |                 |       |                 |                       |       |       |       |
| 81  | Gwydir  | 1,500                              | 1,350                      | 918   | 48                                     | 58  | 76        | 11                             | 16                          | 10,300 | -4         | -6                   | -5                        | 7,490         | 3.0                                   | 6.0                      | 3.0     | 1.7   | 4.5              | 1.3                  | 74              | -14   |                                   | 8.4          | 159   | 261                 | 268                  | 389   | 490             | 456   | 539             | 21                    | 32    | 32    | 35    |
| 83  | Oberon (Reticulator)                                    | 1,350                              | 1,440                      | 1,108   | 90                                     | 26  | 75        | 8                              | 12                          | 9,540  | -4         | -4                   | -7                        | 6,030         | -0.4                                  | -0.5                     | 2.2     | -0.4  | -0.8             | 2.1                  | -48             | 191   |                                   |              | 20  | 27                  | 8                    | 703   | 851             | 913   | 837             | 97                    | 147   | 123   | 97    |
| 84  | Gilgandra (Groundwater)                                 | 934                                | 915                        | 678   | 79                                     | 75  | 70        | 11                             | 17                          | 12,600 | -12        | -12                  | -12                       | 8,010         | 0.8                                   | 0.8                      | 0.4     | 1.5   | 1.4              | 1.0                  | -79             | 9     |                                   | 18.0         | 0   | 4                   | 31                   | 346   | 341             | 417   | 424             | 63                    | 53    | 60    | 75    |
| 85  | Uralla  | 917                                | 921                        | 635   | 90                                     | 83  | 57*       | 14                             | 16                          | 11,100 | -7         | -9                   | -11                       | 9,970         | -0.8                                  | 0.1                      | 0.8     | -0.1  | 0.4              | 1.1                  | 48              | 136   |                                   | 2.5          | 0   | 0                   | 0                    | 395   | 475             | 478   | 385             | 168                   | 193   | 210   | 135   |
| 86  | Hay (Dual Supply)                                       | 1,100                              | 1,180                      | 887   | 85                                     | 57  | 57        | 11                             | 24                          | 17,500 | -14        | -16                  | -17                       | 8,040         | -0.4                                  | -0.7                     | 0.8     | -0.1  | -0.5             | 1.0                  | -44             | 77    |                                   | 6.8          | 0   | 0                   | 0                    | 545   | 618             | 650   | 595             | 226                   | 249   | 265   | 235   |
| 87  | Bourke (Dual Supply)                                    | 1,750                              | 1,940                      | 1,406   | 90                                     | 98  | 79        | 10                             | 23                          | 16,700 | -16        | -17                  | -13                       | 7,250         | 0.2                                   | -0.9                     | 1.5     | 0.8   | -0.2             | 2.1                  | -11             | 153   |                                   | 19.7         | 49  | 49                  | 26                   | 1017  | 925             | 1063  | 1017            | 259                   | 225   | 290   | 339   |
| 88  | Wakool (Dual Supply)                                    | 1,480                              | 1,540                      | 1,062   | 65                                     | 48  | 36        | 23                             | 32                          | 21,200 | -8         | -8                   | -9                        | 15,500        | 0.1                                   | 0.1                      | 0.2     | 0.3   | 0.3              | 0.4                  | -30             | 23    |                                   | 6.8          | 37  | 37                  | 23                   | 548   | 644             | 647   | 701             | 85                    | 88    | 95    | 112   |
| 89  | Bogan   | 1,770                              | 2,230                      | 1,874   | 90                                     | 63  | 57        | 14                             | 32                          | 27,400 | -12        | -14                  | -15                       | 11,600        | 0.6                                   | -0.6                     | -0.6    | 1.0   | -0.3             | -0.3                 | -124            | -44   |                                   | 50.1         | 0   | 0                   | 0                    | 835   | 1045            | 1263  | 1586            | 179                   | 226   | 354   | 508   |
| 90  | Guyra   | 1,230                              | 1,100                      | 873   | 90                                     | 51  | 65        | 21                             | 25                          | 19,100 | -4         | -6                   | -7                        | 16,400        | 0.0                                   | 0.1                      | -1.2    | 0.5   | 0.6              | -0.7                 | 241             | -123  |                                   | 5.9          | 16  | 16                  | 16                   | 468   | 512             | 655   | 775             | 150                   | 124   | 126   | 222   |
| 91  | Cabonne   | 924                                | 900                        | 769   | 78                                     | 86  | 56        | 25                             | 45                          | 37,000 | -7         | -4                   | -4                        | 21,000        | -1.8                                  | -0.8                     | -0.8    | -1.3  | -0.3             | -0.4                 | -66             | -84   |                                   | 6.5          | 2   | 0                   | 0                    | 563   | 643             | 555   | 521             | 169                   | 130   | 105   | 89    |
| 92  | Carrathool (Groundwater)                                | 1,690                              | 1,980                      | 1,636   | 90                                     | 88  | 62        | 15                             | 22                          | 16,900 | 3          | 4                    | 2                         | 12,400        | -1.4                                  | 0.9                      | 3.2     | -1.4  | 1.0              | 3.1                  | 109             | 364   |                                   | 15.2         | 34  | 30                  | 79                   | 958   | 1118            | 982   | 993             | 107                   | 94    | 102   | 112   |
| 93  | Tumbarumba  | 928                                | 1,030                      | 880   | 70                                     | 66  | 49        | 20                             | 33                          | 26,500 | -5         | -5                   | -3                        | 17,100        | 0.0                                   | -0.2                     | 0.1     | -0.3  | -0.6             | -0.3                 | -141            | -88   |                                   | 7.3          | 82  | 108                 | 80                   | 373   | 391             | 443   | 500             | 144                   | 149   | 163   | 169   |
| 94  | Gundagai  | 898                                | 919                        | 928   | 53                                     | 63  | 77        | 9                              | 18                          | 15,600 | -8         | -11                  | -12                       | 9,450         | -0.1                                  | 0.6                      | -0.1    | 0.5   | 1.1              | 0.3                  | 112             | 54    |                                   | 4.3          | 0   | 0                   | 0                    | 566   | 566             | 586   | 664             | 203                   | 196   | 213   | 275   |
| 96  | Warren (Dual Supply)                                    | 651                                | 675                        | 718   | 89                                     | 89  | 52        | 7                              | 14                          | 13,500 | -20        | -20                  | -19                       | 6,950         | -1.7                                  | -1.0                     | 0.3     | -1.3  | -0.7             | 0.5                  | -84             | 20    |                                   | 20.5         | 0   | 0                   | 0                    | 447   | 581             | 551   | 495             | 145                   | 197   | 186   | 168   |
| 97  | Bombala   | 594                                | 661                        | 743   | 74                                     | 90  | 30*       | 11                             | 20                          | 21,400 | -13        | -14                  | -15                       | 12,800        | -1.4                                  | -1.2                     | -0.8    | -0.6  | -0.6             | -0.2                 | -83             | -20   |                                   | 3.1          | 0   | 0                   | 0                    | 445   | 501             | 516   | 538             | 82                    | 88    | 100   | 127   |
| 98  | Walcha  | 641                                | 580                        | 630   | 90                                     | 63  | 64        | 16                             | 18                          | 19,700 | -7         | -8                   | -7                        | 17,200        | -0.7                                  | -0.9                     | -1.7    | -0.6  | -0.8             | -1.6                 | -141            | -271  |                                   | 2.5          | 0   | 0                   | 0                    | 607   | 671             | 635   | 689             | 139                   | 155   | 150   | 254   |
| 100   | Bairnald (Dual Supply)                                  | 902                                | 1,080                      | 1,187   | 82                                     | 74  | 47        | 7                              | 16                          | 16,400 | -2         | -4                   | -7                        | 7,950         | -0.8                                  | 2.2                      | 2.1     | -2.0  | 1.1              | 1.6                  | 71              | 251   |                                   | 29.3         | 137   | 87                  | 149                  | 554   | 567             | 578   | 548             | 161                   | 96    | 153   | 105   |
| 101   | Murrumbidgee (Groundwater)                              | 415                                | 421                        | 533   | 90                                     | 63  | 63        | 6                              | 9                           | 11,300 | -15        | -15                  | -16                       | 8,020         | -0.1                                  | -1.0                     | 0.2     | 0.4   | -0.4             | 0.7                  | -35             | 53    |                                   | 9.4          | 0   | 0                   | 0                    | 379   | 365             | 429   | 363             | 120                   | 154   | 146   | 148   |
| 103   | Central Darling (Dual Supply)                           | 2,700                              | 1,840                      | 2,486   | 90                                     | 63  | 79        | 26                             | 45                          | 60,700 | 0          | -3                   | -2                        | 34,700        | -1.6                                  | 4.4                      | 2.2     | -1.6  | 4.4              | 2.3                  | 1392            | 791   |                                   | 12.0         |   | 0                   | 0                    | 783   | 799             | 1466  | 942             | 26                    | 22    | 11    | 16    |
| 104   | Boorowa   | 617                                | 657                        | 1,011   | 90                                     | 56  | 49        | 10                             | 21                          | 30,500 | 0          | -10                  | -11                       | 15,100        | -0.8                                  | -0.6                     | -0.6    | -0.6  | -0.5             | -0.5                 | -229            | -500  |                                   | 1.3          | 53  | 0                   | 0                    | 651   | 627             | 568   | 634             | 309                   | 259   | 143   | 175   |
| 105   | Brewarrina (Dual Supply)                                | 971                                | 1,050                      | 2,234   | 89                                     | 89  | 73        | 5                              | 15                          | 26,700 | -14        | -11                  | -17                       | 11,400        | 5.8                                   | 6.4                      | -0.2    | 6.0   | 0.1              | -0.5                 | -57             | -162  |                                   | 16.2         | 21  | 67                  | 70                   | 1507  | 1248            | 1457  | 1638            | 263                   | 299   | 473   | 560   |
| 106   | Jerilderie (Dual Supply)                                | 439                                | 427                        | 871   | 65                                     | 75  | 58*       | 3                              | 9                           | 16,200 | -28        | -25                  | -27                       | 7,060         | -1.5                                  | -0.8                     | -1.8    | 0.0   | 0.3              | -0.7                 | -86             | -114  |                                   | 7.6          | 0   | 0                   | 0                    | 560   | 698             | 706   | 739             | 119                   | 139   | 171   | 176   |
| Medians (% of LWUs basis) for 200 to 1,500 Properties |   | 24,836                             |                            |   |  |   |           | 17,200                         |                             |        | -7 -7 -11  |                      |                           | -0.6 -0.4 0.2 |                                       |                          |         |       |                  | -69 15               |                 |       |                                   |              |   | 526 557 623 649     |                      |       | 139 145 148 158 |       |                 |                       |       |       |       |
| Median All LWUs (% of LWUs basis)                     |   |                                    |                            |   | Current Replacement Cost \$/Assessment |   |           | 16,450                         |                             |        | Net D/E -8 |                      |                           | ERRR 1.1      |                                       |                          |         |       |                  | Loan payment \$/prop |                 |       |                                   |              |   | OMA \$ per property |                      |       | \$520           |       |                 | Management Cost \$150 |       |       |       |
| Median All LWUs (Statewide basis)                     |   |                                    |                            |   |  |   |           | 16,400                         |                             |        | -1         |                      |                           | 1.6           |                                       |                          |         |       |                  | \$69                 |                 |       |                                   |              |   | \$400               |                      |       |                 |       |                 |                       |       |       |       |
| Totals for all LWUs (including bulk suppliers)        |   | \$757 M Total Water Supply Revenue |                            |   | Total WS CRC \$14,800M                 |   |           | Total WDC \$9,100M             |                             |        |            |                      |                           |               |                                       |                          |         |       |                  |                      |                 |       |                                   |              |   |                     |                      |       |                 |       |                 |                       |       |       |       |

\* Where the residential revenue is reported to be greater than 90% of the revenue from rates and charges, a maximum value of 90% has been adopted. This is shown in *italics bold* in column (58).

\*\* The Operating Cost and Total Cost shown in the table exclude the purchase cost of water but include part of the operating cost of the bulk water provider, apportioned according to the ratio of water purchased to total water supplied to all customers. This differs from the NWI definition, as indicated in section H4.5 on page 355.

+ If the reported management cost is less than \$20/property or not reported, the previous year's management cost has been adopted in column (68) and is shown in *italics bold* . In such cases, the OMA cost per property has not been increased to include this adopted management cost.



Table 12: Water supply - health and levels of service

| WATER UTILITY  |   |         |       | HEALTH                           |       |                              |                       |  |            |  |            |                     |                         |  |            |       |                     | LEVELS OF SERVICE       |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
|--|---|---------|-------|----------------------------------|-------|------------------------------|-----------------------|--|------------|--|------------|---------------------|-------------------------|--|------------|-------|---------------------|-------------------------|-------|--------------------------|-------|-------|--------------------------|---------|----------|--------------------|---|------------------------|--------------------------------------|----------|-------|-----------------------------------|-----|-----|----------------------------|-----|-----|-----|
|  |   |         |       | Drinking Water Management System |       | Water Quality Compliance (%) |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |       | Water Quality Complaints |       |       | Water Service Complaints |         |          | Customer Inquiries | Customers with Restrictions or Legal Action for non-payment of Bills per 1000 props |                        | Incidence of Unplanned Interruptions |          |       | Average Duration of Interruptions |     |     | Drought Water Restrictions |     |     |     |
|  |   |         |       |                                  |       | Physical                     |                       |  |            | Chemical   |            |                     |                         | Microbiological (E. coli)                            |            |       |                     |                         |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
|  |   |         |       |                                  |       | (69)                         |                       | (69a)  | (70)       |  | (70a)      | No. zones compliant | % Pop'n with Compliance | (71)   |            | (71a) | No. zones compliant | % Pop'n with Compliance |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
|  |   |         |       |                                  |       | Basis (68a)                  | External Assmnt (68b) | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (70b)               | (70c) H4                | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (71b) | (71c) H3            |                         |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
| H5   | 12/13                                     | 13/14   | 14/15 | 14/15                            | 12/13 | 13/14                        | 14/15                 | 14/15  | 14/15      | 14/15  | 12/13      | 13/14               | 14/15                   | 14/15  | 14/15      | 14/15 | 12/13               | 13/14                   | 14/15 | 12/13                    | 13/14 | 14/15 | 14/15                    | (73) C9 | (74) C10 | (74a)              | Restrictions (75a) C18  | Legal Action (75b) C19 | (77) C17                             | (78) C15 | (78a) |                                   |     |     |                            |     |     |     |
|  | Sydney Water                              | ISO9001 | Yes   |                                  |       | 100                          | 100                   | 100  | Yes        | 13/13  | 100        | 100                 | 100                     | Yes  | 13 of 13   | 100   | 0.5                 | 0.4                     | 0.2   | 0.2                      | 0.2   | 0.2   |                          |         | 3.90     | 0.60               | 160   | 183                    | 179                                  | 153      | 151   | 147                               |     |     |                            |     |     |     |
|  | Hunter Water                              | ADWG    | No    |                                  |       | 100                          | 100                   | 100  | Yes        | 5 of 5   | 100        | 100                 | 100                     | Yes  | 5 of 5     | 100   | 3                   | 3                       | 3     | 0.2                      | 0.1   | 0.1   |                          |         | 7.27     | 2.19               | 236   | 303                    | 267                                  | 142      | 128   | 136                               |     |     |                            |     |     |     |
|  | Water NSW                                 |         |       |                                  |       |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
| LWUs with > 10,000 Properties  |   |         |       |                                  |       |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
| 1  | Gosford                                   | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | Yes   | 2 of 2              | 100                     | 25    | 15                       | 12    | -     | -                        | -       | -        | 0                  | 6   | 171                    | 187                                  | 126      | 199   | 311                               | 382 | 0   | 0                          | 0   |     |     |
| 2  | Wyong                                     | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 100        | Yes   | 1 of 1              | 100                     | 18    | 5                        | 10    | 5     | 6                        | 6       | -        | 0                  | 2   | 86                     | 70                                   | 57       | 204   | 200                               | 133 | 100 | 100                        | 0   |     |     |
| 3  | Shoalhaven                                | HACCP   |       | 99                               | 99    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 4 of 4              | 100                     | 100  | 100        | Yes   | 4 of 4              | 100                     | 0.3   | 0.3                      | 0.5   | 0     | 0                        | 1       | -        | 0.6                | 1.6   | 82                     | 65                                   | 78       | 194   | 220                               | 135 | 0   | 0                          | 0   |     |     |
| 4  | Rous (Bulk Supplier) (NO SGE)             | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 3 of 3              | 100                     | 100  | 100        | Yes   | 3 of 3              | 100                     | 0     | 0.6                      | 0     | -     | 0                        | 0       | 7        | 0                  | 0   | 2                      | 1                                    | 1        | 180   | 195                               | 237 | 0   | 0                          | 0   |     |     |
| 5  | MidCoast                                  | ADWG    | Yes   | 99                               | 99    | 97                           | Yes                   | 97   | 99         | 100  | Yes        | 5 of 5              | 100                     | 99   | 100        | 100   | Yes                 | 5 of 5                  | 100   | 3                        | 3     | 3     | 1                        | 2       | 4        | 74                 | 0.3   | 2                      | 2                                    | 2        | 6     |                                   |     | 0   | 9                          | 0   |     |     |
| 6  | Tweed                                     | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 3 of 3              | 100                     | 98   | 100        | 100   | Yes                 | 3 of 3                  | 100   | 4                        | 5     | 6     | 24                       | 28      | 17       | 105                | 0.0   | 12                     | 27                                   | 50       | 19    | 160                               | 149 | 134 | 0                          | 0   | 0   |     |
| 7  | Port Macquarie-Hastings (Unfiltered)      | ADWG    |       | 99                               | 99    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 5 of 5              | 100                     | 100  | 100        | 100   | Yes                 | 5 of 5                  | 100   | 9                        | 7     | 6     | 8                        | 14      | 20       | 4                  | 0.3   | 1                      | 11                                   | 10       | 14    | 163                               | 174 | 210 | 100                        | 100 | 100 |     |
| 8  | Riverina (Groundwater) (NO SGE)           | HACCP   | Yes   | 100                              | 94    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 14 of 14            | 100                     | 100  | 100        | 100   | Yes                 | 14 of 14                | 100   | 4                        | 3     | 3     | 2                        | 3       | 2        | 0                  | 7   | 0.1                    | 55                                   | 63       | 57    | 308                               | 173 | 185 | 0                          | 0   | 0   |     |
| 10   | Coffs Harbour                             | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 3 of 3              | 100                     | 100  | 100        | 100   | Yes                 | 3 of 3                  | 100   | 0                        | 0     | 0     | 0                        | 0       | 0        | 0                  | 2   | 0                      | 35                                   | 9        | 11    | 120                               | 120 | 120 | 0                          | 0   | 0   |     |
| 11   | Albury City                               | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 99   | 100        | 100   | Yes                 | 1 of 1                  | 100   | 4                        | 3     | 3     | 2                        | 1       | 1        | 16                 | 1   | 23                     | -                                    | -        | -     | 104                               | 124 | 137 | 0                          | 0   | 0   |     |
| 12   | Fish River WS (Unfiltered, Bulk Supplier) | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 98         | 100   | Yes                 | 1 of 1                  | 100   | 0                        | 0     | 0     | 0                        | 0       | 0        | 1                  | 0   | 0                      | 1                                    | 0.2      | 0.4   | 1640                              | 600 | 600 | 0                          | 0   | 0   |     |
| 13   | Tamworth Regional                         | ADWG    |       | 96                               | 89    | 91                           | Yes                   | 100  | 100        | 100  | Yes        | 7 of 7              | 100                     | 100  | 99         | 100   | Yes                 | 7 of 7                  | 100   | 0.8                      | 0.2   | 0     | 47                       | 56      | 43       | -                  | 0   | 0                      | 1                                    | -        | -     |                                   |     | 0   | 60                         | 100 |     |     |
| 14   | Clarence Valley                           | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 5 of 5              | 100                     | 96   | 100        | 100   | Yes                 | 5 of 5                  | 100   | 8                        | 23    | 14    | 28                       | 57      | 68       | 6                  | 0   | 5                      | -                                    | -        | -     | 120                               |     | 120 | 0                          | 0   | 0   |     |
| 15   | Eurobodalla                               | ADWG    |       | 95                               | 94    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 0.5                      | 0.9   | 0.7   | 0                        | 0       | 0        | 99                 | 0   | 6                      | 57                                   | 93       | 120   | 240                               | 190 | 220 | 0                          | 0   | 0   |     |
| 16   | Wingecarribee                             | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 13                       | 12    | 8     | 72                       | 72      | 55       | 0                  | 0   | 7                      | 53                                   | 73       | 14    | 91                                | 108 | 122 | 100                        | 100 | 100 |     |
| 17   | Queanbeyan (Reticulator)                  | ADWG    |       | 100                              | 98    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 100        | 100   | Yes                 | 1 of 1                  | 100   | 0                        | 0     | 0     | 31                       | 23      | 19       | 12                 | 0   | 0                      | 0                                    | 0        | 0     | 1                                 | 180 | 180 | 180                        | 100 | 100 | 100 |
| 18   | Dubbo                                     | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 100        | 100   | Yes                 | 1 of 1                  | 100   | 0.6                      | 0.4   | 0.7   | 4                        | 3       | 3        | 46                 | 0   | 0                      | 27                                   | 58       | 20    | 152                               | 75  | 131 | 0                          | 0   | 0   |     |
| 19   | Orange                                    | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 2                        | 1     | 1     | 59                       | 53      | 62       | -                  | 0.7   | 0                      | 66                                   | 73       | 51    | 240                               | 238 | 255 | 100                        | 100 | 100 |     |
| 20   | Goulburn Mulwaree                         | ADWG    |       | 95                               | 92    | 98                           | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 99   | 100        | 100   | Yes                 | 2 of 2                  | 100   | 3                        | 8     | 5     | 28                       | 28      | 36       | -                  | 4   | 0.1                    | 276                                  | 17       | 3     | 180                               | 180 | 180 | 100                        | 100 | 100 |     |
| 21   | Bathurst Regional                         | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 99         | 100   | Yes                 | 1 of 1                  | 100   | 38                       | 35    | 34    | 45                       | 24      | 28       | -                  | 0   | 0                      | 1                                    | 2        | 2     | 120                               | 120 | 120 | 0                          | 0   | 0   |     |
| 22   | Lismore (Reticulator)                     | ADWG    |       | 98                               | 99    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 0.5                      | 0     | 0     | 0                        | 1       | 2        | 67                 | 0   | 3.5                    | 123                                  | 32       | 49    | 288                               | 120 | 140 | 0                          | 0   | 0   |     |
| 23   | Bega Valley (Unfiltered)                  | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 8 of 8              | 100                     | 100  | 100        | 100   | Yes                 | 7 of 8                  | 100   | 9                        | 13    | 13    | 5                        | 1       | 2        | 6                  | 0   | 4                      | 3                                    | 1        | 3     | 120                               | 95  | 95  | 0                          | 0   | 0   |     |
| 24   | Ballina (Reticulator)                     | ADWG    |       | 99                               | 99    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 3 of 3              | 100                     | 99   | 99         | 100   | Yes                 | 3 of 3                  | 100   | 0.4                      | 4     | 0     | 0                        | 4       | 0        | 62                 | 0   | 2.0                    | 1                                    | 1        | 0     | 120                               | 120 | 120 | 0                          | 0   | 0   |     |
| 25   | Kempsey (Groundwater)                     | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 7 of 7              | 100                     | 100  | 100        | 100   | Yes                 | 7 of 7                  | 100   | 0.4                      | 0.7   | 0.2   | 0                        | 0       | 0.2      | 106                | 1   | 0                      | 68                                   | 72       | 124   | 165                               | 127 | 215 | 0                          | 30  | 16  |     |
| 26   | Essential Energy                          | ADWG    |       | 100                              | 92    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 8                        | 0     | 0     | 1                        | 0       | 0.1      | -                  | 31  | 0                      | -                                    | -        | -     |                                   |     | 0   | 0                          | 56  |     |     |
| 27   | Byron (Reticulator)                       | ADWG    |       | 100                              | 98    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 100        | 100   | Yes                 | 2 of 2                  | 100   | 0.5                      | 1     | 2     | 0                        | 0       | 0        | 4                  | 3   | 0.1                    | 14                                   | 14       | 13    | 120                               | 120 | 120 | 0                          | 0   | 0   |     |
| 28A  | Goldenfields (Reticulator) (NO SGE)       | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 100  | 100        | 100   | Yes                 | 1 of 1                  | 100   | 10                       | 7     | 5     | 39                       | 1       | 0        | 47                 | 1   | 0                      | 95                                   | 77       | 96    | 235                               | 192 | 205 | 0                          | 0   | 0   |     |
| 28B  | Goldenfields (Bulk Supplier) (NO SGE)     | ADWG    |       | 100                              | 98    | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 3 of 3              | 100                     | 100  | 100        | 100   | Yes                 | 3 of 3                  | 100   | -                        | 0     | 0     | 0                        | -       | -        | -                  | -   |                        | -                                    | -        | -     |                                   |     | 0   | 0                          | 0   |     |     |
| Medians (% of LWUs basis excl bulk suppliers) for >10,000 Properties |   |         |       |                                  |       |                              |                       |  |            |  |            |                     |                         |  |            |       |                     | 2                       | 3     | 2                        | 5     | 5     | 5                        |         |          |                    | 36  | 35                     | 16                                   | 147      | 163   | 135                               | 0   | 0   | 0                          |     |     |     |
| LWUs with 3,001 - 10,000 Properties                                  |   |         |       |                                  |       |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |       |                          |       |       |                          |         |          |                    |   |                        |                                      |          |       |                                   |     |     |                            |     |     |     |
| 29   | Armidale Dumaresq                         | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 1 of 1              | 100                     | 98   | 100        | 100   | Yes                 | 1 of 1                  | 100   | 0                        | 5     | 1     | 0                        | 1       | 0        | 0                  | 1   | 0                      | 115                                  | 136      | 74    | 134                               | 139 | 133 | 0                          | 0   | 0   |     |
| 30   | Griffith                                  | ADWG    |       | 100                              | 100   | 100                          | Yes                   | 100  | 100        | 100  | Yes        | 2 of 2              | 100                     | 100  | 99         | 100   | Yes                 | 2 of 2                  | 100   | 3                        | 2     | 2     | 43                       | 27      | 48       | 0                  | 3   | 144                    | 24                                   | 23       | 24    | 90                                | 90  | 90  |                            |     |     |     |

Table 12: Water supply - health and levels of service

| WATER UTILITY  |                                | HEALTH                           |  |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |         | LEVELS OF SERVICE        |        |                        |                          |          |          |                    |   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |
|--|--------------------------------|----------------------------------|--|------------------------------|-----------------------|--|------------|--|------------|---------------------|-------------------------|--|------------|-------|---------------------|-------------------------|---------|--------------------------|--------|------------------------|--------------------------|----------|----------|--------------------|---|-------|--------------------------------------|--------|-------|-----------------------------------|--------|-------|----------------------------|-----|-----|-----|-----|-----|-----|---|---|---|
|  |                                | Drinking Water Management System |  | Water Quality Compliance (%) |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |         | Water Quality Complaints |        |                        | Water Service Complaints |          |          | Customer Inquiries | Customers with Restrictions or Legal Action for non-payment of Bills per 1000 props |       | Incidence of Unplanned Interruptions |        |       | Average Duration of Interruptions |        |       | Drought Water Restrictions |     |     |     |     |     |     |   |   |   |
|  |                                |                                  |  | Physical                     |                       |  |            | Chemical   |            |                     |                         | Microbiological (E. coli)                            |            |       |                     |                         |         |                          |        |                        |                          |          |          |                    |   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |
|  |                                |                                  |  | (69)                         |                       | (69a)  | (70)       |  | (70a)      | No. zones compliant | % Pop'n with Compliance | (71)   |            | (71a) | No. zones compliant | % Pop'n with Compliance | (73) C9 | (74) C10                 | (74a)  | Restrictions (75a) C18 | Legal Action (75b) C19   | (77) C17 | (78) C15 | (78a)              |   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |
|  |                                |                                  |  | Basis (68a)                  | External Assmnt (68b) | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (70b)               | (70c) H4                | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (71b) | (71c) H3            | (12/13                  | 13/14   | 14/15                    | (12/13 | 13/14                  | 14/15                    | (12/13   | 13/14    | 14/15              | (12/13  | 13/14 | 14/15                                | (12/13 | 13/14 | 14/15                             | (12/13 | 13/14 | 14/15                      |     |     |     |     |     |     |   |   |   |
| 38   | Moree Plains (Groundwater)     | ADWG                             |  | 98                           | 99                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 6 of 6   | 100        | 100   | 99                  | 100                     | Yes     | 6 of 6                   | 100    | 0                      | 6                        | 3        | 88       | 90                 | 87  | -     | 0.0                                  | 0      | 22    | 613                               | -      | 90    | 60                         | 60  | 0   | 0   | 0   |     |     |   |   |   |
| 39   | Cowra                          | ADWG                             |  | 100                          | 95                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 99    | 99                  | 100                     | Yes     | 1 of 1                   | 100    | 24                     | 5                        | 12       | 20       | 20                 | 0   | 0     | 8                                    | 0.2    | -     | -                                 | -      | 180   | 180                        | 180 | 0   | 0   | 0   |     |     |   |   |   |
| 40   | Central Tablelands (NO SGE)    | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 2 of 2   | 100        | 100   | 100                 | 100                     | Yes     | 2 of 2                   | 100    | 3                      | 2                        | 5        | 6        | 12                 | 15  | 39    | 6                                    | 0      | 48    | 50                                | 41     | 180   | 180                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 41   | Muswellbrook                   | ADWG                             |  | 94                           | 91                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 100   | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 16                     | 20                       | 18       | 1        | 2                  | 2   | 64    | 1                                    | 0      | 2     | 2                                 | 2      | 163   | 234                        | 270 | 0   | 0   | 0   |     |     |   |   |   |
| 42   | Corowa                         | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 99    | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 6                      | 3                        | 3        | 17       | 22                 | 2   | 0     | 0                                    | 10     | 168   | 46                                | 46     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 43   | Tumut                          | ADWG                             |  | 100                          | 99                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 4 of 4   | 100        | 100   | 100                 | 99                      | Yes     | 3 of 4                   | 99     | 2                      | 3                        | 3        | 2        | 5                  | 4   | 26    | 0.2                                  | 34     | -     | -                                 | -      | 120   | 120                        | 120 | 41  | 41  | 50  |     |     |   |   |   |
| 44   | Gunnedah (Groundwater)         | ADWG                             |  | 89                           | 92                    | 98   | Yes        | 100  | 98         | 98                  | Yes                     | 3 of 4   | 99         | 100   | 99                  | 99                      | Yes     | 3 of 4                   | 99     | 0                      | 0                        | 1        | -        | 24                 | 33  | 9     | 0                                    | 0      | -     | 7                                 | 3      | 104   | 180                        | 150 | 100 | 100 | 100 |     |     |   |   |   |
| 45   | Upper Hunter                   | ADWG                             |  | 97                           | 98                    | 97   | Yes        | 100  | 100        | 100                 | Yes                     | 4 of 4   | 100        | 100   | 100                 | 100                     | Yes     | 4 of 4                   | 100    | 1                      | 2                        | 1        | 44       | 49                 | 27  | -     | 0                                    | 0      | 26    | 25                                | 27     | 45    | 50                         | 60  | 0   | 65  | 56  |     |     |   |   |   |
| 46   | Narrabri (Groundwater)         | ADWG                             |  | 100                          | 99                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 6 of 6   | 100        | 100   | 100                 | 100                     | Yes     | 6 of 6                   | 100    | 25                     | 32                       | 11       | 36       | 113                | 18  | 6     | 0                                    | 11     | -     | 4                                 | 3      | 110   | 90                         | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 47   | Bellingen (Unfiltered)         | ADWG                             |  | 98                           | 97                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 2 of 2   | 100        | 100   | 100                 | 100                     | Yes     | 2 of 2                   | 100    | 3.9                    | 0.2                      | 2        | 10       | 17                 | 16  | 7     | 1                                    | 1      | 2     | 2                                 | 2      | 120   | 120                        | 120 | 0   | 68  | 78  |     |     |   |   |   |
| 48   | Leeton                         | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 100   | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 0                      | 0                        | 0        | 1        | 1                  | 0   | 0     | 0                                    | 0      | 20    | 14                                | 15     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 49   | Young (Reticulator)            | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 100                 | 100                     | Yes     | 1 of 1                   | 100    | 2                      | 2                        | 2        | 11       | 2                  | 3   | 13    | 1                                    | 17     | 17    | 19                                | 41     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 50   | Cooma-Monaro                   | ADWG                             |  | 97                           | 96                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 100   | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 0                      | 3                        | 2        | -        | 18                 | 15  | -     | 0                                    |        | -     | 3                                 | 3      |       | 180                        | 180 | 100 | 100 | 100 |     |     |   |   |   |
| 51   | Forbes                         | ADWG                             |  | 100                          | 98                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 100                 | 100                     | Yes     | 1 of 1                   | 100    | 1                      | 4                        | 2        | 3        | 38                 | 53  | 2     | 2                                    | 0.0    | 118   | 106                               | 115    | 120   | 120                        | 120 | 100 | 36  | 0   |     |     |   |   |   |
| 52   | Snowy River (Unfiltered)       | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 5 of 5   | 100        | 100   | 100                 | 100                     | Yes     | 5 of 5                   | 100    | 1                      | 1.7                      | 2        | 6        | 17                 | 24  | 0     | 0                                    | 0      | 15    | 26                                | 25     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 53   | Berrigan (Dual Supply)         | ADWG                             |  | 98                           | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 4 of 4   | 100        | 100   | 100                 | 100                     | Yes     | 4 of 4                   | 100    | 3                      | 3                        | 7        | 19       | 3                  | 10  | 11    | 0                                    | 7      | 34    | 14                                | 21     | 90    | 60                         | 60  | 0   | 0   | 0   |     |     |   |   |   |
| 54   | Deniliquin                     | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 99                  | 100                     | Yes     | 1 of 1                   | 100    | 2                      | 1                        | 1        | 3        | 2                  | 3   | 14    | 0                                    | 0      | 428   | 14                                | 25     | 60    | 65                         | 90  | 0   | 0   | 0   |     |     |   |   |   |
| 55   | Warrumbungle                   | ADWG                             |  | 80                           | 90                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 8 of 8   | 100        | 100   | 100                 | 100                     | Yes     | 8 of 8                   | 100    | 3                      | 2                        | 2        | 0        | 8                  | 12  | 35    | 0                                    | 0      | -     | 1                                 | 1      | 120   | 104                        | 142 | 0   | 46  | 79  |     |     |   |   |   |
| 56   | Yass Valley                    | ADWG                             |  | 85                           | 95                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 99    | 100                 | 100                     | Yes     | 1 of 1                   | 100    | 10                     | 22                       | 2        | 10       | 14                 | 20  | 12    | 0                                    | 0.0    | 44    | 50                                | 54     | 240   | 240                        | 240 | 100 | 0   | 0   |     |     |   |   |   |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                                |                                  |  |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |         | 2                        | 2      | 2                      |                          |          |          |                    |   |       |                                      |        |       |                                   |        |       |                            | 25  | 26  | 21  | 120 | 120 | 120 | 0 | 0 | 0 |
| LWUs with 1,501 - 3,000 Properties                       |                                |                                  |  |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |         |                          |        |                        |                          |          |          |                    |   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |
| 57   | Wellington                     | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 2 of 2   | 100        | 100   | 99                  | 99                      | Yes     | 1 of 2                   | 91     | 0                      | 0                        | 0        | 26       | 26                 | 30  | 25    | 4                                    |        | 31    | 31                                | 14     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 58   | Cootamundra (Reticulator)      | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 100                 | 100                     | Yes     | 1 of 1                   | 100    | -                      | 0                        | 0        | 48       | 44                 | 55  | 4     | 1                                    | 3      | 8     | 8                                 | 15     | 120   | 90                         | 90  | 0   | 0   | 0   |     |     |   |   |   |
| 59   | Lachlan                        | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 99    | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 1.4                    | 1                        | 0        | 2        | 25                 | -   | -     |                                      |        | 9     | -                                 | -      | 100   | 100                        |     | 0   | 0   | 0   |     |     |   |   |   |
| 60   | Glen Innes Severn              | ADWG                             |  | 100                          | 96                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 2 of 2   | 100        | 100   | 100                 | 100                     | Yes     | 2 of 2                   | 100    | 0                      | 0                        | 0        | 0        | 0                  | 0   | 16    | 2                                    | 0      | 34    | 34                                | 13     | 180   | 180                        | 180 | 0   | 0   | 40  |     |     |   |   |   |
| 61   | Liverpool Plains               | HACCP                            |  | 100                          | 87                    | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 100   | 100                 | 100                     | Yes     | 3 of 3                   | 100    | -                      | 0.7                      | 1.8      | 63       | 61                 | 75  | 7     | 0                                    | 0      | 55    | 48                                | 46     | 45    | 40                         | 35  | 0   | 0   | 49  |     |     |   |   |   |
| 62   | Narromine (Groundwater)        | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 98   | 100        | 100                 | Yes                     | 1 of 1   | 100        | 98    | 100                 | 100                     | Yes     | 1 of 1                   | 100    | 7                      | 0                        | 0        | 3        | 16                 | 0   | 133   | 0                                    | 6      | -     | -                                 | 0      | 60    | 60                         | 60  | 0   | 0   | 0   |     |     |   |   |   |
| 63   | Narrandera (Groundwater)       | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 100                 | 100                     | Yes     | 1 of 1                   | 100    | -                      | 48                       | 0        | 12       | 26                 | 25  | -     |                                      |        | 24    | 73                                | 19     | 120   | 120                        | 120 | 0   | 0   | 0   |     |     |   |   |   |
| 65   | Murray (Dual Supply)           | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 2 of 2   | 100        | 100   | 99                  | 100                     | Yes     | 2 of 2                   | 100    | 0                      | 0                        | 0        | 0        | 0                  | 0   | -     | 0                                    | 1      | 14    | 6                                 | 11     | 90    | 90                         | 90  | 100 | 100 | 0   |     |     |   |   |   |
| 67   | Cobar                          | ADWG                             |  | 95                           | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 100   | 100                 | 100                     | Yes     | 1 of 1                   | 100    | 12                     | 13                       | 10       | 22       | 23                 | -   | -     |                                      |        | 2     | 3                                 | -      | 60    | 90                         |     | 100 | 100 | 100 |     |     |   |   |   |
| 66   | Cobar WB (Bulk Supplier Raw Wa |                                  |  |                              |                       |  |            |  |            |                     |                         |  |            |       |                     |                         |         |                          |        |                        |                          | -        | -        | -                  | -   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |
| 68   | Tenterfield                    | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 99    | 99                  | 100                     | Yes     | 3 of 3                   | 100    | 7                      | 5                        | 1        | 3        | 20                 | 2   | 3     | 5                                    | 0      | 7     | 13                                | 13     | 120   | 180                        | 180 | 0   | 0   | 0   |     |     |   |   |   |
| 70   | Kyogle                         | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 1 of 1   | 100        | 99    | 99                  | 100                     | Yes     | 1 of 1                   | 100    | 7                      | 5                        | 2        | 6        | 16                 | 19  | 1     | 0                                    | 0      | 13    | -                                 | 9      | 90    |                            | 90  | 0   | 0   | 69  |     |     |   |   |   |
| 71   | Palerang                       | ADWG                             |  | 100                          | 100                   | 100  | Yes        | 100  | 100        | 100                 | Yes                     | 3 of 3   | 100        | 100   | 100                 | 100                     | Yes     | 3 of 3                   | 100    | 3                      | 1                        | 0        | 54       | 2                  | 5   | 22    | 0                                    | 0      | 5     | 5                                 | 45     | 90    | 90                         | 90  | 0   | 0   | 0   |     |     |   |   |   |
| 73   | Upper Lachlan                  | ADWG                             |  | 90                           | 83                    | 100  | Yes        | 10   |            |                     |                         |  |            |       |                     |                         |         |                          |        |                        |                          |          |          |                    |   |       |                                      |        |       |                                   |        |       |                            |     |     |     |     |     |     |   |   |   |



Table 12: Water supply - health and levels of service

| WATER UTILITY  |                               | HEALTH                                      |              |                              |                       |  |   |  |            |                     |                         |  |            |       |                      |                         |   |                     | LEVELS OF SERVICE        |                        |                        |  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
|--|-------------------------------|---|--------------|------------------------------|-----------------------|--|---|--|------------|---------------------|-------------------------|--|------------|-------|----------------------|-------------------------|---|---------------------|--------------------------|------------------------|------------------------|--|---------------------------|---------------------|--------------------|---|--------------|--------------------------------------|-----|-----|-----------------------------------|-----|-----|----------------------------|-----|----|--|
|  |                               | Drinking Water Management System            |              | Water Quality Compliance (%) |                       |  |   |  |            |                     |                         |  |            |       |                      |                         |   |                     | Water Quality Complaints |                        |                        | Water Service Complaints   |                           |                     | Customer Inquiries | Customers with Restrictions or Legal Action for non-payment of Bills per 1000 props |              | Incidence of Unplanned Interruptions |     |     | Average Duration of Interruptions |     |     | Drought Water Restrictions |     |    |  |
|  |                               |   |              | Physical                     |                       |  |   | Chemical   |            |                     |                         | Microbiological (E. coli)                            |            |       |                      |                         |   |                     |                          |                        |                        |  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
|  |                               |   |              | (69)                         |                       | (69a)  | (70)  |  | (70a)      | No. zones compliant | % Pop'n with Compliance | (71)   |            | (71a) | No. zones compliant  | % Pop'n with Compliance | (73) C9   | (74) C10            | (74a)                    | Restrictions (75a) C18 | Legal Action (75b) C19 | (77) C17   | (78) C15                  | (78a)               |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
|  |                               |   |              | Basis (68a)                  | External Assmnt (68b) | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ?                                  | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (70b)               | (70c) H4                | % Samples complying with 2011 NHMRC/NRMMC Guidelines | Complied ? | (71b) | (71c) H3             | (12/13 13/14 14/15)     | (12/13 13/14 14/15)                                   | (12/13 13/14 14/15) | (12/13 13/14 14/15)      | (12/13 13/14 14/15)    | (12/13 13/14 14/15)    | (12/13 13/14 14/15)  | (12/13 13/14 14/15)       | (12/13 13/14 14/15) |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
| LWUs with 200 - 1,500 Properties                       |                               |   |              |                              |                       |  |   |  |            |                     |                         |  |            |       |                      |                         |   |                     |                          |                        |                        |  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
| 81   | Gwydir                        | ADWG  | 99           | 100                          | 100                   | Yes  | 99  | 99   | 100        | Yes                 | 3 of 3                  | 100  | 100        | 99    | 100                  | Yes                     | 3 of 3  | 100                 | 8                        | 19                     | 6                      | 0  | 0                         | 0                   | -                  | 0   | 1            | 3                                    | 3   | 3   | 180                               | 180 | 180 | 16                         | 16  | 0  |  |
| 83   | Oberon (Reticulator)          | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 0                        | 3                      | 0                      | 4  | 4                         | 4                   | -                  | 1   | 0            | 11                                   | 2   | 1   | 120                               | 120 | 120 | 0                          | 0   | 0  |  |
| 84   | Gilgandra (Groundwater)       | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 98         | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 8                        | 13                     | 4                      | 22   | 36                        | 33                  | -                  | 0   | 13           | 11                                   | 8   | 8   | 90                                | 90  | 75  | 0                          | 0   | 0  |  |
| 85   | Uralla                        | ADWG  | 100          | 100                          | 100                   | Yes  | 99  | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 100   | 100                  | Yes                     | 2 of 2  | 100                 | 11                       | 4                      | 1                      | 9  | 10                        | 6                   | 0                  | 0   | 0            | 106                                  | 35  | 38  | 100                               | 120 | 120 | 0                          | 12  | 0  |  |
| 86   | Hay (Dual Supply)             | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 2                        | 0                      | 0                      | 8  | 10                        | 10                  | 4                  | 0   | 0            | 38                                   | 8   | 8   | 120                               | 120 | 120 | 0                          | 0   | 0  |  |
| 87   | Bourke (Dual Supply)          | ADWG  | 100          | 80                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 98    | 100                  | Yes                     | 1 of 1  | 100                 | 0                        | 0                      | 0                      | 17   | 23                        | 33                  | 0                  | 0   | 22           | 713                                  | 684 | 684 | 60                                | 45  | 60  | 0                          | 9   | 0  |  |
| 88   | Wakool (Dual Supply)          | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 5 of 5                  | 100  | 100        | 100   | 100                  | Yes                     | 5 of 5  | 100                 | 0                        | 5                      | 1                      | 0  | 10                        | 9                   | 0                  | 0   | 0            | 3                                    | 10  | 6   | 60                                | 60  | 60  | 0                          | 0   | 0  |  |
| 89   | Bogan                         | ADWG  | 90           | 100                          | 100                   | Yes  | 100   | 96   | 100        | Yes                 | 1 of 1                  | 100  | 100        | 98    | 100                  | Yes                     | 1 of 1  | 100                 | 0                        | 0                      | 0                      | 50   | 47                        | 105                 | -                  | 0   | 0            | 47                                   | 34  | 24  | 90                                | 95  | 171 | 0                          | 33  | 0  |  |
| 90   | Guyra                         | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 2                        | 8                      | 11                     | 11   | 32                        | 10                  | 2                  | 0   | 0            | 45                                   | 52  | 44  | 180                               | 180 | 150 | 0                          | 40  | 59 |  |
| 91   | Cabonne                       | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 98         | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 3                        | 1                      | 0                      | 3  | 1                         | 1                   | 7                  | 0   | 2            | -                                    | 7   | 5   | 150                               | 180 | 0   | 0                          | 0   | 0  |  |
| 92   | Carrathool (Groundwater)      | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 3 of 3                  | 100  | 100        | 100   | 100                  | Yes                     | 3 of 3  | 100                 | 4                        | 2                      | 1                      | 79   | 12                        | 7                   | 74                 | 0   | 0            | 72                                   | 1   | 0   | 60                                | 180 | 0   | 100                        | 100 | 0  |  |
| 93   | Tumbarumba                    | ADWG  | 100          | 95                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 98    | 100                  | Yes                     | 2 of 2  | 100                 | 2                        | 0                      | 0                      | 2  | 1                         | 1                   | 7                  | 0   | 0            | 26                                   | 22  | 9   | 120                               | 180 | 120 | 0                          | 0   | 0  |  |
| 94   | Gundagai                      | ADWG  | 70           | 85                           | 100                   | Yes  | 98  | 99   | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | -                        | 8                      | 0                      | 2  | 2                         | -                   | -                  | -   | 13           | 41                                   | -   | 60  | 60                                | 60  | 100 | 100                        | 100 |    |  |
| 96   | Warren (Dual Supply)          | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 100   | 100                  | Yes                     | 2 of 2  | 100                 | 27                       | 9                      | 20                     | 24   | 13                        | 16                  | 6                  | 0   | 0            | 11                                   | 16  | 21  | 120                               | 120 | 120 | 0                          | 0   | 0  |  |
| 97   | Bombala                       | ADWG  | 95           | 87                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 100   | 100                  | Yes                     | 2 of 2  | 100                 | 15                       | 11                     | 14                     | 6  | 6                         | 8                   | -                  | 0   | 0            | -                                    | -   | 0   | 40                                | 40  | 40  | 55                         | 55  | 51 |  |
| 98   | Walcha                        | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 1                        | 0                      | 0                      | 0  | 19                        | 3                   | -                  | 0   | 0            | 2                                    | -   | 14  | 120                               | 120 | 0   | 16                         | 100 |    |  |
| 100  | Balranald (Dual Supply)       | ADWG  | 80           | 96                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 100   | 100                  | Yes                     | 2 of 2  | 100                 | -                        | 0                      | 5.5                    | 3  | -                         | -                   | -                  | 0   | 0            | -                                    | 66  | -   | 60                                | 90  | 90  | 100                        | 0   | 0  |  |
| 101  | Murrumbidgee (Groundwater)    | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 100        | 100   | 100                  | Yes                     | 2 of 2  | 100                 | 0                        | 0                      | 0                      | 20   | 10                        | -                   | -                  | -   | -            | -                                    | -   | -   | 120                               | 200 | 0   | 0                          | 0   |    |  |
| 103  | Central Darling (Dual Supply) | ADWG  | 80           | 97                           | 100                   | Yes  | 100   | 98   | 100        | Yes                 | 2 of 2                  | 100  | 100        | 98    | 100                  | Yes                     | 2 of 2  | 100                 | 60                       | 60                     | 50                     | 54   | 114                       | 46                  | 0                  | 0   | 0            | 14                                   | 14  | 16  | 180                               | 240 | 120 | 0                          | 0   | 66 |  |
| 104  | Boorowa                       | ADWG  | 70           | 60                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 98         | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 3                        | 49                     | 8                      | 0  | 5                         | 0                   | 35                 | 0   | 0            | 3                                    | -   | 55  | 75                                | 90  | 75  | 42                         | 38  | 65 |  |
| 105  | Brewarrina (Dual Supply)      | ADWG  | 93           | 95                           | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 2 of 2                  | 100  | 96         | 99    | 100                  | Yes                     | 2 of 2  | 100                 | -                        | 4                      | 9                      | 4  | 10                        | 64                  | 4                  | 0   | 0            | 6                                    | 20  | 4   | 15                                | 15  | 60  | 0                          | 0   | 0  |  |
| 106  | Jerilderie (Dual Supply)      | ADWG  | 100          | 100                          | 100                   | Yes  | 100   | 100  | 100        | Yes                 | 1 of 1                  | 100  | 100        | 100   | 100                  | Yes                     | 1 of 1  | 100                 | 21                       | 20                     | 8                      | 0  | 20                        | 0                   | 0                  | 0   | 0            | 21                                   | 6   | 16  | 120                               | 120 | 120 | 0                          | 0   | 0  |  |
| Medians (% of LWUs) for 200 to 1,500 Properties        |                               |   |              |                              |                       |  |   |  |            |                     |                         |  |            |       |                      |                         |   |                     | 1                        | 2                      | 1                      | 27 13 9 110 110 120 6 0 0  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
| Median All LWUs (% of LWUs basis)                      |                               |   | Physical 100 |                              |                       |  | Chemical 100                                |  |            |                     | Microbiological 100     |  |            |       | Quality Complaints 2 |                         |   |                     | Service 10               |                        |                        |  | Interruption Incidence 14 |                     |                    |   | Duration 120 |                                      |     |     | Restrictions 0                    |     |     |                            |     |    |  |
| Median All LWUs (Statewide basis)                      |                               |   | 100          |                              |                       |  | 100   |  |            |                     | 100                     |  |            |       | 3                    |                         |   |                     | Complaints 6             |                        |                        |  | 24                        |                     |                    |   | 133          |                                      |     |     | 0                                 |     |     |                            |     |    |  |
| Totals for all LWUs (including bulk suppliers)         |                               | Physical 95 LWUs complied (100% of 95 LWUs) |              |                              |                       |  | Chemical 95 LWUs complied (100% of 95 LWUs) |  |            |                     |                         | E. coli 95 LWUs complied (100% of 95 LWUs)           |            |       |                      |                         | 33 LWUs applied restrictions for non payment of bills |                     |                          |                        |                        | 29 LWUs applied drought water restrictions (ie. 30% of the LWUs) |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
|  |                               | 98.3% of 4600 samples complied              |              |                              |                       |  | 99.9% of 4800 samples complied              |  |            |                     |                         | 99.9% of 19400 samples complied                      |            |       |                      |                         |   |                     |                          |                        |                        |  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |
| 95 LWUs (100%) have a Drinking Water Management System |                               |   |              |                              |                       |  |   |  |            |                     |                         |  |            |       |                      |                         |   |                     |                          |                        |                        |  |                           |                     |                    |   |              |                                      |     |     |                                   |     |     |                            |     |    |  |

NOTES:

1. Where chemical water quality is compliant (column 70 - health related) the 95th percentile of results does not exceed the guideline value for each chemical. Refer also to pages 355 and 356 and to Note 7 on page 287.
2. Where the compliance for microbiological water quality (column 71 - health related) is equal to or greater than 98%, the LWU is compliant. Refer also to pages 355 and 356 and to Note 7 on page 287.
3. Physical water quality (column 69 - aesthetic) is compliant if the mean of results is within the Guideline values. Refer also to pages 355 and 356 and to Note 7 on page 287.
4. In each of 2012-13, 2013-14 and 2014-15, the public drinking water supply for 99.9% of the urban population in regional NSW complied with the 2011 ADWG for both microbiological and chemical water quality (cols 70, 70a, 71 and 71a).



Table 13: Water supply - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY  |   | OPERATION & MAINTENANCE (O&M) COST <sup>2</sup> |                          |                       |                                     |                       |                            |                          |                                |                        |                              |                             | MANAGEMENT COST                     |                                    |                                       |                       | OMA <sup>1</sup>                    |   |                               | O & M Cost Components for TYPE of ASSET |                      |  |                              |                         |                                 |                       |   |                               |                                 |                             |  |                       |                |  |  |
|--|---|---|--------------------------|-----------------------|-------------------------------------|-----------------------|----------------------------|--------------------------|--------------------------------|------------------------|------------------------------|-----------------------------|-------------------------------------|------------------------------------|---------------------------------------|-----------------------|-------------------------------------|---|-------------------------------|---|----------------------|--|------------------------------|-------------------------|---------------------------------|-----------------------|---|-------------------------------|---------------------------------|-----------------------------|--|-----------------------|----------------|--|--|
|  |   | Total O&M Cost<br><br>\$/prop (79a)             | Components (1) - Process |                       |                                     |                       |                            |                          | Components (2) - Type of Asset |                        |                              |                             |                                     | Components                         |                                       |                       | Total OMA Cost<br><br>\$/prop (91b) | Components                              |                               | PUMPING STATION                         |                      |  |                              |                         | WATER MAIN                      |                       |   |                               | TREATMENT                       |                             |  |                       |                |  |  |
|  |   |   | Maintenance<br><br>(79)  | Operation<br><br>(80) | Energy<br><br>(\$/property)<br>(81) | Chemicals<br><br>(82) | Bulk Purchase<br><br>(82a) | Dams & Weirs<br><br>(83) | Mains<br><br>(84)              | Reservoirs<br><br>(85) | Pumping Stations<br><br>(86) | Water Treatment<br><br>(87) | Other Excl Bulk Purchas<br><br>(88) | Admin<br><br>(\$/property)<br>(89) | Engineering & Supervision<br><br>(90) | Total Management Cost |                                     | Head works<br><br>(\$/property)<br>(92) | Distri-<br>bution<br><br>(93) | O&M Cost<br><br>(c/kL)<br>(94)          | O&M Cost<br><br>(95) | Operation Cost<br><br>(\$'000/pumping station)<br>(96) | Maintenance Cost<br><br>(97) | Energy Cost<br><br>(98) | O&M Cost<br><br>(c/kL)<br>(100) | O&M Cost<br><br>(101) | Operation Cost<br><br>(\$'000/100km)<br>(102) | Maintenance Cost<br><br>(103) | O&M Cost<br><br>(c/kL)<br>(104) | Operation Cost<br><br>(105) | Maintenance Cost<br><br>(\$/property)<br>(106) | Chemical<br><br>(107) |                |  |  |
|  |   |   |                          |                       |                                     |                       |                            |                          |                                |                        |                              |                             |                                     |                                    |                                       | (\$/prop)<br>(91a)    |                                     |   |                               |   |                      |  |                              |                         |                                 |                       |   |                               |                                 |                             |  |                       | (c/kL)<br>(91) |  |  |
|  |   |   |                          |                       |                                     |                       |                            |                          |                                |                        |                              |                             |                                     |                                    |                                       |                       |                                     |   |                               |   |                      |  |                              |                         |                                 |                       |   |                               |                                 |                             |  |                       |                |  |  |
| 2014/15  |   |   |                          |                       |                                     | 2014/15               |                            |                          |                                |                        | 2014/15                      |                             |                                     | 2014/15                            |                                       | 2014/15               |                                     |   |                               |   | 2014/15              |  |                              |                         | 2014/15                         |                       |   |                               |                                 |                             |  |                       |                |  |  |
| LWUs with > 10,000 Properties  |   |   |                          |                       |                                     |                       |                            |                          |                                |                        |                              |                             |                                     |                                    |                                       |                       |                                     |   |                               |   |                      |  |                              |                         |                                 |                       |   |                               |                                 |                             |  |                       |                |  |  |
| 1  | Gosford                                   | 222   | 102                      | 84                    | 19                                  | 14                    | 3                          | 23                       | 75                             | 13                     | 35                           | 64                          | 9                                   | 97                                 | 12                                    | 109                   | 50                                  | 331                                     | 136                           | 195                                     | 16                   | 105  | 27                           | 21                      | 57                              | 34                    | 544   | 54                            | 490                             | 30                          | 38   | 13                    | 14             |  |  |
| 2  | Wyong                                     | 216   | 78                       | 108                   | 14                                  | 13                    | 2                          | 9                        | 88                             | 9                      | 28                           | 58                          | 21                                  | 66                                 | 38                                    | 103                   | 38                                  | 319                                     | 70                            | 249                                     | 10                   | 75   | 20                           | 18                      | 37                              | 33                    | 460   | 168                           | 292                             | 21                          | 38   | 7                     | 13             |  |  |
| 3  | Shoalhaven                                | 146   | 36                       | 80                    | 17                                  | 13                    | 0                          | 3                        | 50                             | 6                      | 22                           | 45                          | 21                                  | 91                                 | 39                                    | 129                   | 43                                  | 276                                     | 52                            | 223                                     | 7                    | 39   | 5                            | 4                       | 30                              | 17                    | 157   | 85                            | 72                              | 15                          | 23   | 9                     | 13             |  |  |
| 4  | Rous (Bulk Supplier) (NO SGE)             | 145   | 47                       | 47                    | 31                                  | 20                    |                            | 6                        | 18                             | 6                      | 33                           | 59                          | 22                                  | 94                                 | 29                                    | 123                   | 45                                  | 268                                     | 255                           | 13                                      | 12                   | 343  | 3                            | 19                      | 322                             | 7                     | 169   |                               | 169                             | 22                          | 20   | 20                    | 20             |  |  |
| 5  | MidCoast                                  | 351   | 126                      | 159                   | 54                                  | 11                    | 1                          | 0                        | 102                            | 14                     | 67                           | 66                          | 102                                 | 76                                 | 51                                    | 126                   | 53                                  | 477                                     | 191                           | 286                                     | 28                   | 96   | 2                            | 15                      | 78                              | 43                    | 283   | 30                            | 253                             | 28                          | 41   | 14                    | 11             |  |  |
| 6  | Tweed                                     | 234   | 96                       | 84                    | 24                                  | 29                    | 1                          | 14                       | 32                             | 10                     | 36                           | 80                          | 60                                  | 133                                | 52                                    | 185                   | 65                                  | 419                                     | 235                           | 185                                     | 13                   | 43   | 7                            | 7                       | 29                              | 11                    | 144   | 19                            | 125                             | 28                          | 40   | 11                    | 29             |  |  |
| 7  | Port Macquarie-Hastings (Unfiltered)      | 245   | 100                      | 98                    | 28                                  | 14                    | 6                          | 18                       | 64                             | 11                     | 44                           | 45                          | 57                                  | 97                                 | 56                                    | 153                   | 70                                  | 398                                     | 119                           | 279                                     | 20                   | 71   | 1                            | 25                      | 45                              | 29                    | 240   | 116                           | 124                             | 21                          | 19   | 11                    | 14             |  |  |
| 8  | Riverina (Groundwater) (NO SGE)           | 199   | 76                       | 41                    | 70                                  | 12                    | 0                          |                          | 65                             | 9                      | 76                           | 32                          | 16                                  | 30                                 | 41                                    | 72                    | 14                                  | 271                                     | 173                           | 97                                      | 15                   | 62   | 0                            | 5                       | 56                              | 12                    | 116   | 55                            | 61                              | 6                           |  | 20                    | 12             |  |  |
| 10   | Coffs Harbour                             | 241   | 104                      | 108                   | 9                                   | 17                    | 3                          | 19                       | 93                             | 22                     | 13                           | 76                          | 17                                  | 102                                | 51                                    | 153                   | 63                                  | 395                                     | 162                           | 233                                     | 5                    | 45   | 7                            | 4                       | 34                              | 38                    | 375   | 103                           | 272                             | 31                          | 43   | 15                    | 17             |  |  |
| 11   | Albury City                               | 187   | 31                       | 71                    | 73                                  | 6                     | 5                          |                          | 37                             | 11                     | 84                           | 38                          | 11                                  | 83                                 | 7                                     | 91                    | 29                                  | 277                                     | 152                           | 127                                     | 27                   | 103  | 0                            | 13                      | 90                              | 12                    | 159   | 119                           | 40                              | 12                          | 23   | 9                     | 6              |  |  |
| 12   | Fish River WS (Unfiltered, Bulk Supplier) |   |                          |                       |                                     |                       |                            |                          | 0                              | 0                      | 0                            | 0                           | 0                                   |                                    |                                       |                       |                                     |   |                               |   |                      | 0  |                              |                         |                                 | 0                     | 0   |                               |                                 | 0                           |  |                       |                |  |  |
| 13   | Tamworth Regional                         | 317   | 105                      | 155                   | 7                                   | 12                    | 37                         | 41                       | 74                             | 10                     | 20                           | 134                         |                                     | 67                                 | 134                                   | 201                   | 55                                  | 518                                     | 326                           | 192                                     | 5                    | 20   | 4                            | 9                       | 8                               | 20                    | 252   | 76                            | 175                             | 37                          | 96   | 27                    | 12             |  |  |
| 14   | Clarence Valley                           | 221   | 105                      | 98                    | 5                                   | 13                    | 0                          | 13                       | 81                             | 13                     | 10                           | 30                          | 73                                  | 126                                | 41                                    | 168                   | 57                                  | 388                                     | 19                            | 369                                     | 3                    | 11   | 3                            | 3                       | 6                               | 28                    | 155   | 1                             | 154                             | 10                          | 15   | 3                     | 13             |  |  |
| 15   | Eurobodalla                               | 199   | 59                       | 107                   | 21                                  | 12                    |                            | 3                        | 107                            | 10                     | 26                           | 36                          | 17                                  | 206                                |                                       | 206                   | 115                                 | 405                                     | 150                           | 255                                     | 14                   | 36   | 4                            | 3                       | 29                              | 60                    | 237   | 131                           | 106                             | 20                          | 21   | 4                     | 12             |  |  |
| 16   | Wingecarribee                             | 228   | 109                      | 24                    | 21                                  | 11                    | 63                         | 1                        | 67                             | 9                      | 25                           | 28                          | 36                                  | 121                                | 23                                    | 143                   | 60                                  | 371                                     | 275                           | 96                                      | 11                   | 32   | 4                            | 1                       | 27                              | 28                    | 193   |                               | 193                             | 12                          | 16   | 1                     | 11             |  |  |
| 17   | Queanbeyan (Reticulator)                  | 375   | 49                       | 48                    | 3                                   |                       | 276                        |                          | 87                             | 8                      | 4                            |                             | 1                                   | 149                                | 52                                    | 201                   | 89                                  | 577                                     |                               | 577                                     | 2                    | 17   | 3                            | 2                       | 12                              | 38                    | 502   | 230                           | 272                             |                             |  |                       |                |  |  |
| 18   | Dubbo                                     | 322   | 98                       | 162                   | 13                                  | 49                    | 0                          | 0                        | 74                             | 14                     | 18                           | 191                         | 25                                  | 136                                | 24                                    | 160                   | 33                                  | 482                                     | 333                           | 149                                     | 4                    | 35   | 6                            | 4                       | 25                              | 15                    | 256   | 40                            | 216                             | 39                          | 121  | 21                    | 49             |  |  |
| 19   | Orange                                    | 195   | 39                       | 102                   | 40                                  | 13                    |                            | 16                       | 56                             |                        | 47                           | 67                          | 9                                   | 84                                 | 61                                    | 144                   | 35                                  | 339                                     | 153                           | 186                                     | 11                   | 102  | 14                           |                         | 89                              | 13                    | 155   | 82                            | 73                              | 16                          | 49   | 5                     | 13             |  |  |
| 20   | Goulburn Mulwaree                         | 277   | 152                      | 102                   | 5                                   | 18                    | 0                          | 51                       | 104                            | 2                      | 6                            | 71                          | 44                                  | 95                                 | 54                                    | 149                   | 61                                  | 426                                     | 196                           | 230                                     | 3                    | 8  |                              | 2                       | 6                               | 42                    | 414   | 2                             | 412                             | 29                          | 44   | 8                     | 18             |  |  |
| 21   | Bathurst Regional                         | 402   | 138                      | 208                   | 10                                  | 45                    |                            | 53                       | 147                            | 8                      | 13                           | 181                         |                                     | 80                                 | 63                                    | 143                   | 32                                  | 545                                     | 245                           | 300                                     | 3                    | 19   | 2                            | 2                       | 15                              | 33                    | 585   | 265                           | 320                             | 41                          | 100  | 36                    | 45             |  |  |
| 22   | Lismore (Reticulator)                     | 382   | 56                       | 96                    | 6                                   | 0                     | 223                        | 0                        | 70                             | 3                      | 8                            | 0                           | 78                                  | 77                                 | 34                                    | 111                   | 50                                  | 493                                     |                               | 493                                     | 3                    | 22   | 2                            | 3                       | 17                              | 31                    | 290   | 290                           |                                 | 0                           |  |                       |                |  |  |
| 23   | Bega Valley (Unfiltered)                  | 245   | 102                      | 108                   | 35                                  |                       |                            | 28                       | 115                            | 16                     | 48                           | 39                          |                                     | 131                                | 167                                   | 298                   | 124                                 | 543                                     | 234                           | 310                                     | 20                   | 35   | 2                            | 7                       | 25                              | 48                    | 268   | 103                           | 165                             | 16                          | 34   | 5                     |                |  |  |
| 24   | Ballina (Reticulator)                     | 342   | 65                       | 26                    | 3                                   | 0                     | 248                        | 0                        | 43                             | 5                      | 7                            | 9                           | 30                                  | 131                                | 21                                    | 152                   | 52                                  | 494                                     | 5                             | 489                                     | 2                    | 24   | 12                           |                         | 12                              | 15                    | 186   | 52                            | 134                             | 3                           | 9  | 0                     |                |  |  |
| 25   | Kempsey (Groundwater)                     | 296   | 126                      | 114                   | 45                                  | 11                    |                            | 16                       | 83                             | 2                      | 72                           | 116                         | 6                                   | 104                                | 78                                    | 182                   | 60                                  | 477                                     |                               |   | 24                   | 41   |                              | 15                      | 26                              | 27                    | 211   | 10                            | 201                             | 38                          | 86   | 19                    | 11             |  |  |
| 26   | Essential Energy                          | 891   | 317                      | 293                   | 207                                 | 74                    | 0                          | 0                        | 157                            | 47                     | 308                          | 379                         | 0                                   | 70                                 | 64                                    | 134                   | 22                                  | 1025                                    | 615                           | 410                                     | 51                   | 294  | 29                           | 67                      | 198                             | 26                    | 434   | 66                            | 368                             | 63                          | 225  | 80                    | 74             |  |  |
| 27   | Byron (Reticulator)                       | 346   | 37                       | 95                    |                                     | 5                     | 209                        |                          | 61                             | 18                     |                              | 27                          | 31                                  | 120                                | 17                                    | 137                   | 45                                  | 482                                     | 24                            | 458                                     |                      |  |                              |                         | 20                              | 288                   | 132   | 156                           | 9                               | 20                          | 2  | 5                     |                |  |  |
| 28A  | Goldenfields (Reticulator) (NO SGE)       | 581   | 179                      | 61                    | 159                                 | 10                    | 172                        | 0                        | 120                            | 12                     | 205                          | 25                          | 47                                  | 124                                | 124                                   | 248                   | 41                                  | 830                                     | 423                           | 407                                     | 34                   | 57   | 1                            | 12                      | 44                              | 20                    | 67  | 20                            | 48                              | 4                           | 9  | 5                     | 10             |  |  |
| 28B  | Goldenfields (Bulk Supplier) (NO SGE)     | 90  | 22                       | 18                    | 39                                  | 11                    |                            |                          | 13                             | 2                      | 44                           | 23                          | 8                                   | 30                                 | 30                                    | 60                    | 12                                  | 150                                     |                               |   | 9                    |  |                              |                         |                                 | 3                     | 78  | 28                            | 50                              | 5                           | 8  | 4                     | 11             |  |  |
| Medians (% of LWUs basis excl bulk suppliers) for >10,000 Properties |   | 245   | 99                       | 100                   | 18                                  | 12                    | 1                          | 6                        | 75                             | 10                     | 25                           | 51                          | 19                                  | 97                                 | 46                                    | 147                   | 53                                  | 423                                     | 162                           | 249                                     | 11                   | 38   | 4                            | 5                       | 29                              | 28                    | 254   | 82                            | 175                             | 20                          | 38   | 10                    | 13             |  |  |
| LWUs with 3,001 - 10,000 Properties                                  |   |   |                          |                       |                                     |                       |                            |                          |                                |                        |                              |                             |                                     |                                    |                                       |                       |                                     |   |                               |   |                      |  |                              |                         |                                 |                       |   |                               |                                 |                             |  |                       |                |  |  |
| 29   | Armidale Dumaresq                         | 308   | 219                      | 43                    | 8                                   | 37                    | 0                          | 39                       | 84                             | 12                     | 11                           | 117                         | 43                                  | 58                                 | 54                                    | 112                   | 34                                  | 420                                     | 189                           | 231                                     | 3                    | 8  |                              | 2                       | 6                               | 25                    | 254   |                               | 254                             | 35                          |  | 80                    | 37             |  |  |
| 30   | Griffith                                  | 405   | 52                       | 255                   | 5                                   | 39                    | 54                         |                          | 108                            | 2                      | 7                            | 153                         | 82                                  | 249                                | 48                                    | 297                   | 35                                  | 702                                     | 316                           | 386                                     | 1                    | 15   | 1                            | 4                       | 10                              | 13                    | 196   | 160                           | 36                              | 18                          | 102  | 11                    | 39             |  |  |
| 31   | Lithgow                                   | 426   | 123                      | 103                   | 3                                   | 12                    | 184                        | 0                        | 128                            | 15                     | 8                            | 90                          | 0                                   | 147                                | 49                                    | 196                   | 104                                 | 622                                     | 124                           | 498                                     | 4                    | 16   |                              | 9                       | 7                               | 68                    | 886   | 537                           | 350                             | 48                          | 22   | 57                    | 12             |  |  |
| 32   | Mid-Western Regional                      | 407   | 231                      | 117                   | 17                                  | 31                    | 11                         | 5                        | 149                            | 30                     | 59                           | 154                         |                                     | 41                                 | 85                                    | 126                   | 40                                  | 533                                     | 325                           | 208                                     | 19                   | 37   | 5                            | 21                      | 11                              | 47                    | 449   |                               | 449                             | 49                          | 91   | 32                    | 31             |  |  |
| 33   | Richmond Valley                           | 282   | 66                       | 91                    | 18                                  | 27                    | 80                         | 0                        | 42                             | 8                      | 25                           | 113                         | 13                                  | 169                                | 86                                    | 254                   | 64                                  | 537                                     | 317                           | 220                                     | 6                    | 26   |                              | 8                       | 18                              | 11                    | 160   | 54                            |                                 |                             |  |                       |                |  |  |

Table 13: Water supply - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY  |                             | OPERATION & MAINTENANCE (O&M) COST <sup>2</sup> |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                | MANAGEMENT COST                              |                   |  |                            | OMA <sup>1</sup>       |  | O & M Cost Components for TYPE of ASSET |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
|--|-----------------------------|---|--------------------------|-----------------------|--------------------|-----------------------|-------------------------------|--------------------------------|-------------------|------------------------|---------------------------------|--------------------------------|--|-------------------|--|----------------------------|------------------------|--|---|-------------------------------|-------------------------|-------------------------|-------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------|--------------------------------|----------------------------------|--------------------------|--------------------------------|----------------------------------|-----------------------|------------------------|------------------------|
|  |                             | Total<br>O&M<br>Cost<br><br>\$/prop<br>(79a)    | Components (1) - Process |                       |                    |                       |                               | Components (2) - Type of Asset |                   |                        |                                 |                                |  | Components        |  |                            |                        | Total<br>OMA<br>Cost<br><br>\$/prop<br>(91b) | Components                              |                               | PUMPING STATION         |                         |                               |                                 |                            | WATER MAIN               |                          |                                |                                  | TREATMENT                |                                |                                  |                       |                        |                        |
|  |                             |   | Maintenance<br><br>(79)  | Operation<br><br>(80) | Energy<br><br>(81) | Chemicals<br><br>(82) | Bulk<br>Purchase<br><br>(82a) | Dams<br>& Weirs<br><br>(83)    | Mains<br><br>(84) | Reservoirs<br><br>(85) | Pumping<br>Stations<br><br>(86) | Water<br>Treatment<br><br>(87) | Other<br>Excl<br>Bulk<br>Purchas<br><br>(88) | Admin<br><br>(89) | Engineering &<br>Supervision<br><br>(90) | Total Management Cost      |                        |  | Head<br>works<br><br>(92)               | Distri-<br>bution<br><br>(93) | O&M<br>Cost<br><br>(94) | O&M<br>Cost<br><br>(95) | Operation<br>Cost<br><br>(96) | Maintenance<br>Cost<br><br>(97) | Energy<br>Cost<br><br>(98) | O&M<br>Cost<br><br>(100) | O&M<br>Cost<br><br>(101) | Operation<br>Cost<br><br>(102) | Maintenance<br>Cost<br><br>(103) | O&M<br>Cost<br><br>(104) | Operation<br>Cost<br><br>(105) | Maintenance<br>Cost<br><br>(106) | Chemical<br><br>(107) |                        |                        |
|  |                             |   |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                |  |                   |  | (\$/property)<br><br>(91a) | (\$/prop)<br><br>(91b) |  |   |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
|  |                             |   |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                |  |                   |  |                            |                        |  |   |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       | (\$/prop)<br><br>(91a) | (\$/prop)<br><br>(91b) |
|  |                             |   |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                |  |                   |  |                            |                        |  |   |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
|  |                             | 2014/15   |                          |                       |                    |                       | 2014/15                       |                                |                   |                        |                                 |                                | 2014/15                                      |                   | 2014/15                                  |                            | 2014/15                |  |   |                               |                         | 2014/15                 |                               |                                 |                            | 2014/15                  |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
| 40   | Central Tablelands (NO SGE) | 373   | 189                      | 111                   | 41                 | 33                    |                               | 24                             | 82                | 10                     | 58                              | 148                            | 51   | 197               | 56                                       | 252                        | 75                     | 626  | 300                                     | 325                           | 17                      | 12                      | 3                             | 1                               | 8                          | 24                       | 80                       |                                | 80                               | 44                       | 46                             | 68                               | 33                    |                        |                        |
| 41   | Muswellbrook                | 434   | 297                      | 29                    | 40                 | 49                    | 19                            | 0                              | 32                | 8                      | 66                              | 229                            | 80   | 130               | 63                                       | 192                        | 37                     | 626  | 407                                     | 219                           | 13                      | 43                      | 1                             | 16                              | 26                         | 6                        | 112                      | 7                              | 105                              | 45                       | 10                             | 170                              | 49                    |                        |                        |
| 42   | Corowa                      | 357   | 124                      | 174                   | 40                 | 19                    |                               |                                | 86                | 10                     | 57                              | 160                            | 43   | 113               |  | 113                        | 20                     | 469  | 352                                     | 117                           | 10                      | 39                      | 5                             | 7                               | 27                         | 15                       | 266                      | 40                             | 225                              | 28                       | 106                            | 35                               | 19                    |                        |                        |
| 43   | Tumut                       | 307   | 198                      | 16                    | 71                 | 23                    | 0                             | 0                              | 38                | 6                      | 81                              | 130                            | 52   | 143               | 17                                       | 160                        | 46                     | 467  | 215                                     | 252                           | 23                      | 31                      | 2                             | 2                               | 27                         | 11                       | 93                       |                                | 93                               | 37                       | 11                             | 97                               | 23                    |                        |                        |
| 44   | Gunnedah (Groundwater)      | 307   | 205                      | 14                    | 79                 | 3                     | 6                             |                                | 151               | 15                     | 112                             | 4                              | 20   | 122               | 46                                       | 168                        | 23                     | 475  | 119                                     | 356                           | 16                      | 23                      |                               | 7                               | 16                         | 21                       | 358                      |                                | 358                              | 1                        |                                | 1                                | 3                     |                        |                        |
| 45   | Upper Hunter                | 392   | 135                      | 179                   | 68                 | 10                    | 0                             | 24                             | 158               | 8                      | 121                             | 36                             | 44   | 88                | 179                                      | 267                        | 43                     | 659  | 224                                     | 435                           | 20                      | 41                      | 10                            | 8                               | 23                         | 26                       | 398                      | 142                            | 255                              | 6                        | 19                             | 7                                | 10                    |                        |                        |
| 46   | Narrabri (Groundwater)      | 213   | 154                      |                       | 59                 |                       |                               |                                | 13                | 3                      | 132                             |                                | 64   | 194               | 73                                       | 267                        | 45                     | 480  | 288                                     | 192                           | 22                      | 48                      |                               | 27                              | 22                         | 2                        | 38                       |                                | 38                               |                          |                                |                                  |                       |                        |                        |
| 47   | Bellingen (Unfiltered)      | 141   | 46                       | 48                    | 40                 | 8                     | 0                             | 0                              | 33                | 4                      | 47                              | 49                             | 7  | 194               | 56                                       | 250                        | 90                     | 391  | 59                                      | 333                           | 17                      | 32                      |                               | 5                               | 27                         | 12                       | 82                       | 26                             | 56                               | 18                       | 33                             | 9                                | 8                     |                        |                        |
| 48   | Leeton                      | 449   | 236                      | 88                    | 50                 | 34                    | 41                            |                                | 169               | 0                      | 55                              | 165                            | 18   | 74                | 67                                       | 141                        | 21                     | 590  | 354                                     | 236                           | 8                       | 37                      |                               | 4                               | 34                         | 26                       | 360                      |                                | 360                              | 25                       | 88                             | 43                               | 34                    |                        |                        |
| 49   | Young (Reticulator)         | 186   | 68                       | 33                    | 2                  | 0                     | 83                            | 0                              | 77                | 6                      | 5                               | 0                              | 15   | 32                | 36                                       | 69                         | 24                     | 254  | 20                                      | 234                           | 2                       | 8                       |                               | 4                               | 4                          | 26                       | 250                      | 63                             | 187                              | 0                        |                                |                                  |                       |                        |                        |
| 50   | Cooma-Monaro                | 312   | 101                      | 188                   | 7                  | 17                    |                               |                                | 89                | 33                     | 23                              | 117                            | 49   | 124               | 104                                      | 228                        | 55                     | 540  | 297                                     | 243                           | 6                       | 28                      | 15                            | 5                               | 8                          | 21                       | 244                      | 234                            | 10                               | 28                       | 26                             | 75                               | 17                    |                        |                        |
| 51   | Forbes                      | 599   | 293                      | 144                   | 1                  | 64                    | 98                            | 0                              | 163               | 7                      | 2                               | 298                            | 32   | 51                | 20                                       | 72                         | 10                     | 671  | 456                                     | 215                           | 0                       | 2                       |                               | 1                               | 1                          | 22                       | 438                      |                                | 438                              | 41                       | 112                            | 122                              | 64                    |                        |                        |
| 52   | Snowy River (Unfiltered)    | 206   | 87                       | 67                    | 42                 | 10                    |                               |                                | 46                | 19                     | 70                              | 40                             | 32   | 61                | 44                                       | 105                        | 86                     | 311  | 165                                     | 146                           | 57                      | 20                      | 6                             | 2                               | 12                         | 38                       | 191                      | 5                              | 186                              | 32                       | 21                             | 8                                | 10                    |                        |                        |
| 53   | Berrigan (Dual Supply)      | 350   |                          | 350                   | 0                  | 0                     | 0                             | 0                              | 86                | 0                      | 24                              | 236                            | 4  | 47                | 70                                       | 117                        | 16                     | 467  | 140                                     | 421                           | 3                       | 11                      | 11                            |                                 |                            | 12                       | 146                      | 146                            |                                  | 33                       | 236                            |                                  |                       |                        |                        |
| 54   | Deniliquin                  | 297   | 19                       | 203                   | 76                 |                       |                               |                                | 79                |                        | 91                              | 123                            | 4  | 189               | 41                                       | 230                        | 43                     | 528  | 385                                     | 142                           | 17                      | 64                      |                               | 10                              | 53                         | 15                       | 186                      | 186                            |                                  | 23                       | 123                            |                                  |                       |                        |                        |
| 55   | Warrumbungle                | 528   | 251                      | 173                   | 70                 | 34                    | 0                             | 5                              | 107               | 36                     | 104                             | 195                            | 82   | 124               | 21                                       | 145                        | 47                     | 673  | 235                                     | 437                           | 34                      | 43                      | 6                             | 8                               | 29                         | 35                       | 239                      | 6                              | 232                              | 64                       | 108                            | 53                               | 34                    |                        |                        |
| 56   | Yass Valley                 | 221   | 13                       | 153                   | 18                 | 37                    |                               | 2                              | 13                | 24                     | 26                              | 121                            | 36   | 120               | 98                                       | 218                        | 83                     | 439  | 241                                     | 198                           | 10                      | 10                      | 3                             |                                 | 8                          | 5                        | 25                       |                                | 25                               | 46                       | 84                             |                                  | 37                    |                        |                        |
| Medians (% of LWUs basis) for 3,000 to 10,000 Properties |                             | 353   | 124                      | 117                   | 40                 | 22                    | 0                             | 0                              | 85                | 8                      | 56                              | 124                            | 39   | 121               | 51                                       | 165                        | 39                     | 531  | 238                                     | 235                           | 14                      | 27                      | 5                             | 6                               | 18                         | 21                       | 193                      | 63                             | 127                              | 28                       | 84                             | 34                               | 27                    |                        |                        |
| LWUs with 1,501 - 3,000 Properties                       |                             |   |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                |  |                   |  |                            |                        |  |   |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
| 57   | Wellington                  | 322   | 94                       | 153                   | 19                 | 34                    | 22                            |                                | 81                | 5                      | 30                              | 184                            |  | 108               | 92                                       | 200                        | 45                     | 522  | 313                                     | 209                           | 7                       | 12                      |                               | 4                               | 8                          | 18                       | 228                      | 8                              | 220                              | 41                       | 150                            |                                  | 34                    |                        |                        |
| 58   | Cootamundra (Reticulator)   | 187   | 63                       | 47                    | 0                  | 0                     | 77                            | 0                              | 49                | 5                      | 0                               | 0                              | 57   | 33                | 67                                       | 100                        | 33                     | 287  | 52                                      | 235                           | 0                       | 0                       |                               |                                 |                            | 16                       | 209                      | 1                              | 207                              | 0                        |                                |                                  |                       |                        |                        |
| 59   | Lachlan                     | 638   | 174                      | 266                   | 106                | 92                    |                               |                                | 114               | 8                      | 130                             | 285                            | 100  | 55                | 105                                      | 160                        | 22                     | 798  |   |                               | 18                      | 23                      |                               | 4                               | 19                         | 16                       | 139                      |                                | 139                              | 40                       | 193                            |                                  | 92                    |                        |                        |
| 60   | Glen Innes Severn           | 196   | 134                      |                       | 43                 | 18                    | 0                             | 0                              | 45                | 1                      | 48                              | 67                             | 35   | 28                | 166                                      | 194                        | 116                    | 390  | 156                                     | 234                           | 29                      | 49                      |                               | 5                               | 44                         | 27                       | 126                      |                                | 126                              | 40                       |                                | 49                               | 18                    |                        |                        |
| 61   | Liverpool Plains            | 330   | 231                      | 36                    | 41                 | 21                    |                               | 20                             | 46                | 14                     | 91                              | 72                             | 87   | 253               | 4  | 257                        | 77                     | 587  | 352                                     | 235                           | 27                      | 19                      | 1                             | 10                              | 9                          | 14                       | 96                       | 4                              | 92                               | 22                       | 4                              | 46                               | 21                    |                        |                        |
| 62   | Narromine (Groundwater)     | 274   | 174                      | 30                    | 70                 | 0                     | 0                             | 0                              | 74                | 5                      | 146                             | 35                             | 14   | 150               | 179                                      | 329                        | 54                     | 603  |   |                               | 24                      | 103                     | 5                             | 49                              | 49                         | 12                       | 218                      |                                | 218                              | 6                        | 15                             | 20                               |                       |                        |                        |
| 63   | Narrandera (Groundwater)    | 422   | 178                      | 111                   | 122                | 12                    |                               |                                | 174               | 4                      | 233                             | 12                             |  | 109               | 23                                       | 132                        | 13                     | 555  |   |                               | 22                      | 122                     | 58                            |                                 | 64                         | 17                       | 413                      |                                | 413                              | 1                        |                                |                                  | 12                    |                        |                        |
| 65   | Murray (Dual Supply)        | 347   | 164                      | 132                   | 38                 | 0                     | 12                            | 0                              | 96                | 9                      | 62                              | 150                            | 18   | 70                | 60                                       | 129                        | 31                     | 476  | 290                                     | 186                           | 15                      | 21                      | 4                             | 4                               | 13                         | 23                       | 176                      | 64                             | 112                              | 36                       | 70                             | 80                               |                       |                        |                        |
| 67   | Cobar                       | 875   | 222                      | 594                   |                    | 59                    |                               |                                | 139               | 24                     |                                 | 712                            |  | 86                | 54                                       | 139                        | 33                     | 1015   | 507                                     | 507                           |                         |                         |                               |                                 |                            | 33                       | 271                      | 98                             | 172                              | 170                      | 539                            | 114                              | 59                    |                        |                        |
| 66   | Cobar WB (Bulk Supplier)    |   |                          |                       |                    |                       |                               |                                |                   |                        |                                 |                                |  |                   |  |                            | 83                     |  | 0                                       | 0                             | 488                     | 557                     | 17                            | 81                              | 459                        | 141                      |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |
| 68   | Tenterfield                 | 296   |                          | 235                   | 12                 | 33                    | 17                            | 10                             | 70                | 4                      | 18                              | 171                            | 7  | 228               | 22                                       | 250                        | 108                    | 546  | 218                                     | 328                           | 8                       | 9                       | 3                             |                                 | 6                          | 30                       | 203                      | 203                            |                                  | 74                       | 138                            |                                  | 33                    |                        |                        |
| 70   | Kyogle                      | 463   | 148                      | 209                   | 18                 | 17                    | 71                            | 0                              | 77                | 21                     | 67                              | 226                            | 0  | 108               | 39                                       | 147                        | 57                     | 610  | 427                                     | 183                           | 26                      | 26                      |                               | 19                              | 7                          | 30                       | 264                      |                                | 264                              | 87                       | 209                            |                                  | 17                    |                        |                        |
| 71   | Palerang                    | 443   | 80                       | 303                   | 48                 | 12                    |                               | 35                             | 31                | 5                      | 136                             | 114                            | 121  | 73                | 56                                       | 129                        | 53                     | 573  | 487                                     | 86                            | 55                      | 76                      | 41                            | 8                               | 27                         | 13                       | 93                       | 40                             | 53                               | 47                       | 86                             | 17                               | 12                    |                        |                        |
| 73   | Upper Lachlan               | 445   | 61                       | 283                   | 72                 | 29                    | 0                             | 9                              | 97                | 15                     | 134                             | 158                            | 33   | 66                | 67                                       | 134                        | 69                     | 579  | 289                                     | 289                           | 69                      | 89                      | 32                            | 9                               | 48                         | 50                       | 303                      | 261                            | 42                               | 81                       | 117                            | 12                               | 29                    |                        |                        |
| 74   | Wentworth (Dual Supply)     | 391   | 110                      | 169                   | 93                 |                       | 19                            |                                | 81                |                        | 115                             | 161                            | 15   | 50                | 22                                       | 71                         | 13                     | 463  | 291                                     | 171                           | 21                      | 22                      | 2                             | 2                               | 18                         | 15                       | 103                      |                                | 103                              | 29                       | 155                            | 6                                |                       |                        |                        |
| 75   | Coonamble (Groundwater)     | 430   | 135                      | 90                    | 65                 | 140                   | 0                             | 0                              | 31                | 21                     | 95                              | 226                            | 57   | 0                 | 0  | 0                          | 0                      | 430  | 215                                     | 215                           | 13                      | 80                      |                               | 26                              | 55                         | 4                        | 76                       |                                | 76                               | 31                       | 33                             | 52                               | 140                   |                        |                        |
| 76   | Harden (Reticulator)        | 228   | 94                       | 37                    | 2                  | 6                     | 89                            |                                | 75                | 13                     | 6                               | 23                             | 23   | 235               |  | 235                        | 58                     | 463  |   | 463                           | 2                       | 4                       |                               | 2                               | 1                          | 18                       | 77                       |                                | 77                               | 6                        | 17                             |                                  | 6                     |                        |                        |
| 79   | Walgett (Dual Supply)       | 435   | 88                       | 337                   | 1                  | 9                     | 0                             | 0                              | 86                | 9                      | 121                             | 146                            | 73   | 76                | 0  | 76                         | 4                      | 510  |   |                               | 7                       | 33                      | 30                            | 4                               | 0                          | 5                        | 151                      | 99                             | 52                               | 9                        | 123                            | 15                               | 9                     |                        |                        |
| 80   | Greater Hume                | 350   | 62                       | 67                    | 40                 | 4                     | 178                           |                                | 79                | 15                     | 51                              | 17                             | 10   | 38                | 110                                      | 148                        | 42                     | 498  | 149                                     | 349                           | 15                      | 48                      | 9                             | 2                               | 38                         | 23                       | 97                       | 37                             | 60                               | 5                        | 13                             | 1                                | 4                     |                        |                        |
| Medians (% of LWUs basis) for 1,500 to 3,000 Properties  |                             | 371   | 134                      | 153                   | 41                 | 14                    | 0                             | 0                              | 78                | 8                      | 79                              | 148                            |  |                   |  |                            |                        |  |   |                               |                         |                         |                               |                                 |                            |                          |                          |                                |                                  |                          |                                |                                  |                       |                        |                        |

Table 13: Water supply - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY   |                               | OPERATION & MAINTENANCE (O&M) COST <sup>2</sup> |                          |                       |                    |                       |                            |                          |                                |                        |                              |                             |                                     | MANAGEMENT COST   |                                       |                            |                       | OMA <sup>1</sup>       |  | O & M Cost Components for TYPE of ASSET |                      |                      |                            |                              |                         |                       |                       |                             |                               |                       |                             |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
|---|-------------------------------|---|--------------------------|-----------------------|--------------------|-----------------------|----------------------------|--------------------------|--------------------------------|------------------------|------------------------------|-----------------------------|-------------------------------------|-------------------|---------------------------------------|----------------------------|-----------------------|------------------------|--|---|----------------------|----------------------|----------------------------|------------------------------|-------------------------|-----------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|--------------------|--------------------|--------------------------------------|---------------------|-----------------------------|---------------------|----------------------------|
|   |                               | Total O&M Cost<br><br>\$/prop<br>(79a)          | Components (1) - Process |                       |                    |                       |                            |                          | Components (2) - Type of Asset |                        |                              |                             |                                     |                   | Components                            |                            |                       |                        | Total OMA Cost<br><br>\$/prop<br>(91b) | Components                              |                      | PUMPING STATION      |                            |                              |                         |                       | WATER MAIN            |                             |                               |                       | TREATMENT                   |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
|   |                               |   | Maintenance<br><br>(79)  | Operation<br><br>(80) | Energy<br><br>(81) | Chemicals<br><br>(82) | Bulk Purchase<br><br>(82a) | Dams & Weirs<br><br>(83) | Mains<br><br>(84)              | Reservoirs<br><br>(85) | Pumping Stations<br><br>(86) | Water Treatment<br><br>(87) | Other Excl Bulk Purchas<br><br>(88) | Admin<br><br>(89) | Engineering & Supervision<br><br>(90) | Total Management Cost      |                       | Head works<br><br>(92) |  | Distri-<br>bution<br><br>(93)           | O&M Cost<br><br>(94) | O&M Cost<br><br>(95) | Operation Cost<br><br>(96) | Maintenance Cost<br><br>(97) | Energy Cost<br><br>(98) | O&M Cost<br><br>(100) | O&M Cost<br><br>(101) | Operation Cost<br><br>(102) | Maintenance Cost<br><br>(103) | O&M Cost<br><br>(104) | Operation Cost<br><br>(105) | Maintenance Cost<br><br>(106) | Chemical<br><br>(107) |                    |                    |                                      |                     |                             |                     |                            |
|   |                               |   |                          |                       |                    |                       |                            |                          |                                |                        |                              |                             |                                     |                   |                                       | (\$/property)<br><br>(91a) | (\$/prop)<br><br>(91) |                        |  |   |                      |                      |                            |                              |                         |                       |                       |                             |                               |                       |                             |                               |                       | (c/kL)<br><br>(94) | (c/kL)<br><br>(95) | (\$'000/pumping station)<br><br>(96) | (c/kL)<br><br>(100) | (\$'000/100km)<br><br>(102) | (c/kL)<br><br>(104) | (\$/property)<br><br>(106) |
|   |                               |   |                          |                       |                    |                       |                            |                          |                                |                        |                              |                             |                                     |                   |                                       |                            |                       |                        |  |   |                      |                      |                            |                              |                         |                       |                       |                             |                               |                       |                             |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
|   |                               | 2014/15   |                          |                       |                    |                       |                            | 2014/15                  |                                |                        |                              |                             |                                     | 2014/15           |                                       | 2014/15                    |                       | 2014/15                |  |   |                      |                      | 2014/15                    |                              |                         |                       | 2014/15               |                             |                               |                       |                             |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
| LWUs with 200 - 1,500 Properties                      |                               |   |                          |                       |                    |                       |                            |                          |                                |                        |                              |                             |                                     |                   |                                       |                            |                       |                        |  |   |                      |                      |                            |                              |                         |                       |                       |                             |                               |                       |                             |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
| 81  | Gwydir                        | 503   | 157                      | 164                   | 152                | 31                    | 0                          | 0                        | 144                            | 18                     | 231                          | 78                          | 32                                  | 35                | 0                                     | 35                         | 6                     | 539                    | 291                                    | 248                                     | 42                   | 340                  | 101                        | 16                           | 223                     | 26                    | 234                   | 84                          | 150                           | 14                    | 10                          | 38                            | 31                    |                    |                    |                                      |                     |                             |                     |                            |
| 83  | Oberon (Reticulator)          | 740   | 27                       | 178                   |                    | 29                    | 505                        |                          | 26                             |                        |                              | 208                         |                                     | 72                | 25                                    | 97                         | 18                    | 837                    | 460                                    | 377                                     |                      |                      |                            |                              | 5                       | 87                    |                       | 87                          | 38                            | 178                   | 1                           | 29                            |                       |                    |                    |                                      |                     |                             |                     |                            |
| 84  | Gilgandra (Groundwater)       | 350   | 210                      | 73                    | 47                 | 21                    | 0                          | 0                        | 64                             | 5                      | 136                          | 134                         | 10                                  | 68                | 7                                     | 75                         | 11                    | 424                    | 21                                     | 403                                     | 20                   | 92                   | 19                         | 42                           | 32                      | 9                     | 161                   |                             | 161                           | 19                    | 37                          | 76                            | 21                    |                    |                    |                                      |                     |                             |                     |                            |
| 85  | Uralla                        | 250   | 188                      |                       | 3                  | 59                    |                            | 20                       | 51                             | 3                      | 8                            | 168                         |                                     | 83                | 52                                    | 135                        | 61                    | 385                    | 300                                    | 85                                      | 3                    | 6                    |                            | 4                            | 2                       | 23                    | 119                   |                             | 119                           | 76                    |                             | 110                           | 59                    |                    |                    |                                      |                     |                             |                     |                            |
| 86  | Hay (Dual Supply)             | 361   | 244                      | 17                    | 68                 | 26                    | 6                          | 0                        | 80                             | 26                     | 111                          | 121                         | 17                                  | 226               | 9                                     | 235                        | 21                    | 595                    | 405                                    | 191                                     | 10                   | 49                   |                            | 19                           | 30                      | 7                     | 228                   |                             | 228                           | 11                    |                             | 95                            | 26                    |                    |                    |                                      |                     |                             |                     |                            |
| 87  | Bourke (Dual Supply)          | 678   | 657                      | 5                     | 16                 |                       |                            | 5                        | 114                            | 1                      | 69                           | 343                         | 146                                 | 248               | 91                                    | 339                        | 27                    | 1017                   | 203                                    | 813                                     | 5                    | 48                   |                            | 37                           | 11                      | 9                     | 383                   |                             | 383                           | 27                    |                             | 343                           |                       |                    |                    |                                      |                     |                             |                     |                            |
| 88  | Wakool (Dual Supply)          | 588   | 121                      | 292                   | 66                 | 37                    | 72                         | 3                        | 84                             | 0                      | 97                           | 306                         | 27                                  | 68                | 44                                    | 112                        | 21                    | 701                    |  |   | 18                   | 18                   | 3                          | 3                            | 12                      | 16                    | 73                    | 10                          | 64                            | 57                    | 246                         | 23                            | 37                    |                    |                    |                                      |                     |                             |                     |                            |
| 89  | Bogan                         | 1078  | 443                      | 467                   | 67                 | 101                   |                            | 258                      | 231                            | 92                     | 282                          | 101                         | 114                                 | 97                | 411                                   | 508                        | 84                    | 1586                   | 1221                                   | 365                                     | 47                   | 336                  |                            | 256                          | 80                      | 38                    | 474                   | 252                         | 222                           | 17                    |                             |                               | 101                   |                    |                    |                                      |                     |                             |                     |                            |
| 90  | Guyra                         | 553   |                          | 551                   | 2                  | 0                     | 0                          | 34                       | 102                            | 0                      | 2                            | 401                         | 13                                  | 222               | 0                                     | 222                        | 63                    | 775                    | 628                                    | 147                                     | 1                    | 3                    |                            |                              | 3                       | 29                    | 215                   | 215                         |                               | 113                   | 401                         |                               |                       |                    |                    |                                      |                     |                             |                     |                            |
| 91  | Cabonne                       | 432   | 41                       | 362                   | 21                 | 9                     |                            | 68                       | 130                            | 34                     | 55                           | 103                         | 42                                  | 89                |                                       | 89                         | 41                    | 521                    | 260                                    | 260                                     | 25                   | 16                   | 9                          | 1                            | 6                       | 60                    | 292                   | 283                         | 10                            | 47                    | 76                          | 18                            | 9                     |                    |                    |                                      |                     |                             |                     |                            |
| 92  | Carrathool (Groundwater)      | 882   | 251                      | 188                   | 381                | 9                     | 52                         | 0                        | 238                            | 12                     | 536                          | 44                          | 0                                   | 91                | 21                                    | 112                        | 10                    | 993                    | 298                                    | 695                                     | 49                   | 31                   | 9                          |                              | 22                      | 22                    | 61                    |                             | 61                            | 4                     | 33                          | 2                             | 9                     |                    |                    |                                      |                     |                             |                     |                            |
| 93  | Tumbarumba                    | 331   | 262                      | 59                    | 10                 |                       |                            |                          | 100                            | 57                     | 29                           | 144                         |                                     | 48                | 121                                   | 169                        | 72                    | 500                    | 150                                    | 350                                     | 12                   | 17                   | 1                          | 10                           | 6                       | 43                    | 177                   | 70                          | 108                           | 62                    | 18                          | 126                           |                       |                    |                    |                                      |                     |                             |                     |                            |
| 94  | Gundagai                      | 389   | 131                      | 210                   | 17                 | 30                    | 0                          | 0                        | 61                             | 7                      | 17                           | 303                         | 1                                   | 189               | 86                                    | 275                        | 45                    | 664                    |  |   | 3                    | 9                    |                            |                              | 9                       | 10                    | 167                   | 100                         | 67                            | 50                    | 174                         | 99                            | 30                    |                    |                    |                                      |                     |                             |                     |                            |
| 96  | Warren (Dual Supply)          | 327   | 165                      | 64                    | 54                 | 20                    | 23                         |                          | 153                            | 11                     | 81                           | 36                          | 22                                  | 112               | 56                                    | 168                        | 19                    | 495                    | 173                                    | 322                                     | 9                    | 38                   | 2                          | 11                           | 26                      | 17                    | 480                   | 67                          | 413                           | 4                     | 16                          |                               | 20                    |                    |                    |                                      |                     |                             |                     |                            |
| 97  | Bombala                       | 411   | 146                      | 180                   | 31                 | 54                    | 0                          | 2                        | 78                             | 0                      | 47                           | 284                         | 0                                   | 127               | 0                                     | 127                        | 41                    | 538                    |  |   | 15                   | 14                   |                            | 5                            | 9                       | 25                    | 177                   |                             | 177                           | 92                    | 180                         | 51                            | 54                    |                    |                    |                                      |                     |                             |                     |                            |
| 98  | Walcha                        | 435   | 168                      | 180                   | 84                 | 2                     |                            | 11                       | 52                             | 3                      | 172                          | 197                         |                                     | 143               | 111                                   | 254                        | 134                   | 689                    | 517                                    | 172                                     | 90                   | 53                   | 6                          | 21                           | 26                      | 27                    | 84                    | 4                           | 81                            | 103                   | 153                         | 41                            | 2                     |                    |                    |                                      |                     |                             |                     |                            |
| 100   | Balranald (Dual Supply)       | 443   | 273                      | 19                    | 96                 | 38                    | 18                         | 0                        | 85                             | 23                     | 235                          | 38                          | 44                                  | 105               | 0                                     | 105                        | 12                    | 548                    | 313                                    | 236                                     | 28                   | 43                   |                            | 25                           | 17                      | 10                    | 257                   |                             | 257                           | 5                     |                             |                               | 38                    |                    |                    |                                      |                     |                             |                     |                            |
| 101   | Murrumbidgee (Groundwater)    | 215   | 89                       |                       | 108                | 19                    |                            |                          | 41                             | 19                     | 118                          | 20                          | 18                                  | 10                | 138                                   | 148                        | 15                    | 363                    |  |   | 12                   | 31                   |                            | 3                            | 28                      | 4                     | 100                   |                             | 100                           | 2                     |                             | 1                             | 19                    |                    |                    |                                      |                     |                             |                     |                            |
| 103   | Central Darling (Dual Supply) | 926   | 257                      | 493                   | 96                 | 80                    | 0                          | 36                       | 185                            | 1                      | 103                          | 569                         | 31                                  | 16                | 0                                     | 16                         | 3                     | 942                    | 396                                    | 546                                     | 21                   | 10                   |                            | 1                            | 9                       | 38                    | 208                   | 65                          | 142                           | 117                   | 369                         | 120                           | 80                    |                    |                    |                                      |                     |                             |                     |                            |
| 104   | Boorowa                       | 458   | 317                      | 46                    | 62                 | 34                    |                            | 9                        | 188                            |                        | 63                           | 162                         | 37                                  | 134               | 42                                    | 175                        | 53                    | 634                    | 330                                    | 304                                     | 19                   | 41                   |                            | 1                            | 40                      | 57                    | 254                   |                             | 254                           | 49                    |                             | 128                           | 34                    |                    |                    |                                      |                     |                             |                     |                            |
| 105   | Brewarrina (Dual Supply)      | 1079  | 340                      | 498                   | 98                 | 143                   | 0                          | 0                        | 274                            | 23                     | 198                          | 560                         | 23                                  | 383               | 177                                   | 560                        | 21                    | 1638                   | 1147                                   | 491                                     | 7                    | 47                   | 22                         | 2                            | 23                      | 10                    | 339                   | 24                          | 316                           | 21                    | 340                         | 77                            | 143                   |                    |                    |                                      |                     |                             |                     |                            |
| 106   | Jerilderie (Dual Supply)      | 563   | 410                      | 10                    | 98                 | 33                    | 12                         |                          | 124                            | 8                      | 153                          | 245                         | 20                                  | 92                | 84                                    | 176                        | 16                    | 739                    | 259                                    | 480                                     | 14                   | 75                   |                            | 27                           | 48                      | 11                    | 142                   | 2                           | 140                           | 22                    | 2                           | 210                           | 33                    |                    |                    |                                      |                     |                             |                     |                            |
| Medians (% of LWUs basis) for 200 to 1,500 Properties |                               | 451   | 210                      | 179                   | 64                 | 30                    | 0                          | 0                        | 101                            | 8                      | 100                          | 165                         | 19                                  | 94                | 43                                    | 158                        | 21                    | 649                    | 306                                    | 336                                     | 15                   | 35                   | 9                          | 11                           | 22                      | 19                    | 192                   | 68                          | 142                           | 32                    | 153                         | 76                            | 31                    |                    |                    |                                      |                     |                             |                     |                            |

- NOTES:
- 1. Operating cost is the OMA cost (operation, maintenance & administration (Col 91b)) which comprises the O & M Cost (operation & maintenance cost (Cols 79 to 82 or Cols 83 to 88)) PLUS Management Costs (Col 91a) which is made up of the Administration cost (Col 89) plus Engineering and Supervision cost (Col 90).
  - 2. O & M cost includes a proportion of the OMA cost of the bulk supplier if appropriate or the purchase cost of water if no bulk supplier (Col 82a).



Table 14: Sewerage - utility characteristics

| WATER UTILITY   |                         | ASSESSMENTS - CONNECTIONS - POPULATION |         |         |                              |           |                                    |           |           |            | ASSETS  |                       |                                  |                        |                  |                                    |   | WORKFORCE                            |                                       |                  |                      |                                |              |          |           |   |  |
|---|-------------------------|--|---------|---------|------------------------------|-----------|------------------------------------|-----------|-----------|------------|---------|-----------------------|----------------------------------|------------------------|------------------|------------------------------------|---|--------------------------------------|---------------------------------------|------------------|----------------------|--------------------------------|--------------|----------|-----------|---|--|
|   |                         | Total No of Assessments                |         |         | Connected Properties - Total |           | Connected Properties - Residential |           |           | Population |         | Sewer Mains           | Properties Served per km of Main | Sewage Treatment Works | Pumping Stations | Pumping Stations per 100km of Main | Capital Expenditure (Assets, Renewals, Plant/Equip) |                                      | Capital Works Grants                  | Total Work Force | % Female             | % Undergoing Training          | Outsourcing  | Injuries | Days Lost |   |  |
|   |                         |  |         |         |                              |           |                                    |           |           |            |         |                       |                                  |                        |                  |                                    |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
|   |                         |  |         |         |                              |           |                                    |           |           |            |         |                       |                                  |                        |                  |                                    |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
| (1)   | (2)                     | (3)<br>C8                              | (4)     | (5)     | (5a)<br>C6                   | (6)<br>C5 | Peak<br>(% of Permanent)           | (8)<br>A5 | (9)<br>A6 | (10)<br>A4 | (11)    | (11) /<br>[(8) / 100] | (\$/prop<br>F29                  | \$M<br>F15             | (\$'000)<br>F27  | (Employees<br>/1000 props)<br>(14) | (%)<br>(15)   | (2 or more days<br>per year)<br>(16) | (% of<br>Maintenance<br>Cost)<br>(19) | (No.)<br>(20)    | Total<br>(%)<br>(21) | Due to Injury<br>(No.)<br>(22) | (%)<br>(22a) |          |           |   |  |
| 2012/13   | 2013/14                 | 2014/15                                | 2014/15 | 2014/15 | 2014/15                      | 2014/15   | 2014/15                            | 2014/15   | 2014/15   | 2014/15    | 2014/15 | 2014/15               | 2014/15                          | 2014/15                | 2014/15          | 2014/15                            | 2014/15   | 2014/15                              | 2014/15                               | 2014/15          | 2014/15              | 2014/15                        | 2014/15      | 2014/15  | 2014/15   |   |  |
|   | Sydney Water            |  |         |         | 1,827,000                    |           | 1,716,000                          | 4,721,000 |           | 25,090     | 73      | 26                    |                                  | 261                    | 478              | 4,830                              |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
|   | Hunter Water            |  |         |         | 228,000                      |           | 216,000                            | 535,000   |           | 4,950      | 46      | 19                    |                                  | 179                    | 41               | 0                                  |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
| LWUs with > 10,000 Properties                               |                         |  |         |         |                              |           |                                    |           |           |            |         |                       |                                  |                        |                  |                                    |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
| 1   | Gosford                 | 65650                                  | 65,770  | 65,860  | 1.06                         | 70,000    | 0.95                               | 1.06      | 66,700    | 162,400    | 1,325   | 53                    | 2                                | 184                    | 14               | 418                                | 29.3  | 0                                    | 1.3                                   | 14               | 70                   | 5                              | 3            | 5        | 28        | 0 |  |
| 2   | Wyong                   | 61090                                  | 61,870  | 63,520  | 0.98                         | 61,930    | 0.96                               | 0.97      | 59,400    | 153,900    | 1,212   | 51                    | 6                                | 142                    | 12               | 186                                | 11.5  | 0                                    | 1.0                                   | 10               | 100                  | 0                              | 4            | 6        | 91        | 1 |  |
| 3   | Shoalhaven              | 46420                                  | 46,910  | 47,250  | 0.89                         | 41,870    | 0.94                               | 0.90      | 39,900    | 81,200     | 1,217   | 34                    | 13                               | 217                    | 18               | 295                                | 12.4  | 8,502                                | 2.1                                   | 7                | 100                  | 0                              | 3            | 4        | 54        | 0 |  |
| 5   | MidCoast                | 36380                                  | 36,500  | 36,610  | 0.96                         | 35,140    | 0.92                               | 0.96      | 32,400    | 81,300     | 1,125   | 31                    | 13                               | 208                    | 18               | 105                                | 3.7   | 0                                    | 1.6                                   | 18               | 100                  |                                | 3            | 3        | 75        | 1 |  |
| 6   | Tweed                   | 33050                                  | 33,370  | 33,810  | 0.91                         | 30,760    | 0.95                               | 0.93      | 29,800    | 76,800     | 706     | 44                    | 8                                | 185                    | 26               | 164                                | 5.0   | 0                                    | 2.5                                   | 6                | 97                   | 11                             | 4            | 3        | 30        | 0 |  |
| 7   | Port Macquarie-Hastings | 28690                                  | 28,940  | 29,290  | 0.95                         | 27,830    | 0.93                               | 0.95      | 25,900    | 78,000     | 689     | 40                    | 5                                | 157                    | 23               | 215                                | 6.0   | 0                                    | 1.6                                   | 11               | 100                  | 5                              | 2            | 0        | 0         | 0 |  |
| 9   | Wagga Wagga             | 25050                                  | 25,280  | 26,130  | 1.04                         | 27,180    | 0.93                               | 1.05      | 25,400    | 62,800     | 626     | 43                    | 6                                | 39                     | 6                | 161                                | 4.4   | 0                                    | 1.1                                   | 7                | 100                  | 10                             | 1            | 3        | 2         | 0 |  |
| 10  | Coffs Harbour           | 25160                                  | 25,310  | 25,500  | 0.93                         | 23,710    | 0.94                               | 0.93      | 22,200    | 70,200     | 701     | 34                    | 5                                | 117                    | 17               | 533                                | 12.6  | 294                                  | 1.9                                   | 2                | 86                   | 0                              | 5            | 7        | 260       | 3 |  |
| 11  | Albury                  | 21850                                  | 22,160  | 24,210  | 0.99                         | 23,970    | 0.92                               | 0.99      | 22,200    | 49,200     | 548     | 44                    | 4                                | 58                     | 11               | 78                                 | 1.9   | 0                                    | 0.6                                   | 0                | 7                    | 46                             | 0            | 0        | 0         | 0 |  |
| 13  | Tamworth Regional       | 19170                                  | 19,350  | 19,680  | 1.00                         | 19,680    | 0.92                               | 1.00      | 18,000    | 45,300     | 554     | 36                    | 4                                | 24                     | 4                | 123                                | 2.4   | 0                                    | 2.2                                   | 9                | 44                   | 0                              | 0            | 2        | 0         | 0 |  |
| 15  | Eurobodalla             | 19060                                  | 19,170  | 19,200  | 0.94                         | 18,050    | 0.94                               | 0.94      | 17,000    | 29,500     | 527     | 34                    | 5                                | 130                    | 25               | 218                                | 3.9   | 110                                  | 1.9                                   | 3                | 100                  | 0                              | 2            | 5        | 86        | 1 |  |
| 17  | Queanbeyan              | 15810                                  | 16,180  | 16,780  | 1.03                         | 17,280    | 0.93                               | 1.04      | 16,100    | 39,000     | 336     | 51                    | 1                                | 15                     | 4                | 107                                | 1.9   | 0                                    | 0.6                                   | 19               | 67                   | 5                              | 1            | 0        | 5         | 0 |  |
| 19  | Orange                  | 16200                                  | 16,470  | 16,550  | 1.00                         | 16,550    | 0.92                               | 1.00      | 15,300    | 41,400     | 450     | 37                    | 2                                | 27                     | 6                | 204                                | 3.4   | 0                                    | 0.9                                   | 13               | 100                  |                                | 6            | 0        | 6         | 0 |  |
| 18  | Dubbo                   | 14270                                  | 14,430  | 14,800  | 1.11                         | 16,420    | 0.91                               | 1.12      | 15,000    | 34,900     | 410     | 40                    | 2                                | 13                     | 3                | 1,152                              | 18.9  | 0                                    | 0.7                                   | 9                | 73                   | 0                              | 0            | 4        | 0         | 0 |  |
| 16  | Wingecarribee           | 15460                                  | 16,420  | 16,550  | 0.95                         | 15,730    | 0.94                               | 0.96      | 14,900    | 38,800     | 558     | 28                    | 6                                | 73                     | 13               | 199                                | 3.1   | 450                                  | 2.2                                   | 3                | 64                   | 41                             | 1            | 3        | 11        | 0 |  |
| 14  | Clarence Valley         | 15580                                  | 15,570  | 15,650  | 0.94                         | 14,710    | 0.93                               | 0.94      | 13,700    | 32,400     | 417     | 35                    | 6                                | 93                     | 22               | 1,603                              | 23.6  | 878                                  | 2.1                                   | 7                | 66                   | 0                              | 10           | 0        | 13        | 0 |  |
| 21  | Bathurst Regional       | 14000                                  | 14,300  | 14,700  | 1.08                         | 15,870    | 0.90                               | 1.08      | 14,200    | 33,700     | 400     | 40                    | 1                                | 33                     | 8                | 352                                | 5.6   | 0                                    | 0.8                                   | 15               | 38                   | 4                              | 1            | 0        | 0         | 0 |  |
| 24  | Ballina                 | 14770                                  | 14,990  | 15,170  | 0.93                         | 14,110    | 0.90                               | 0.93      | 12,800    | 36,500     | 327     | 43                    | 4                                | 113                    | 35               | 364                                | 5.1   | 0                                    | 1.6                                   |                  | 100                  | 23                             | 0            | 4        | 0         | 0 |  |
| 22  | Lismore                 | 12060                                  | 12,150  | 12,190  | 1.05                         | 12,790    | 0.91                               | 1.06      | 11,700    | 29,000     | 359     | 36                    | 3                                | 33                     | 9                | 367                                | 4.7   | 0                                    | 1.9                                   | 0                |                      | 5                              | 0            | 0        | 0         | 0 |  |
| 23  | Bega Valley             | 12390                                  | 12,430  | 12,430  | 0.98                         | 12,180    | 0.93                               | 0.98      | 11,300    | 20,800     | 401     | 30                    | 10                               | 58                     | 14               | 334                                | 4.1   | 0                                    | 1.9                                   |                  | 100                  | 7                              | 0            | 3        | 14        | 0 |  |
| 27  | Byron                   | 10800                                  | 10,930  | 11,100  | 0.96                         | 10,660    | 0.86                               | 0.96      | 9,220     | 20,500     | 251     | 42                    | 4                                | 81                     | 32               | 80                                 | 0.9   | 0                                    | 1.8                                   | 0                | 100                  | 1                              | 1            | 6        | 7         | 0 |  |
| 26  | Essential Energy        | 9720                                   | 9,720   | 9,720   | 1.00                         | 9,720     | 0.93                               | 1.00      | 9,040     | 19,000     | 246     | 40                    | 2                                | 11                     | 4                | 269                                | 2.6   | 0                                    | 0.8                                   |                  | 88                   | 0                              | 0            | 0        | 0         | 0 |  |
| 20  | Goulburn Mulwaree       | 9340                                   | 10,260  | 10,430  | 1.03                         | 10,740    | 0.91                               | 1.03      | 9,760     | 22,100     | 285     | 38                    | 2                                | 24                     | 8                | 212                                | 2.3   | 450                                  | 2.0                                   | 9                | 100                  | 4                              | 1            | 5        | 3         | 0 |  |
| 25  | Kempsey                 | 8970                                   | 9,360   | 9,400   | 1.04                         | 9,780     | 0.92                               | 1.04      | 8,990     | 19,500     | 273     | 36                    | 7                                | 84                     | 31               | 166                                | 1.6   |                                      | 2.3                                   | 13               | 100                  | 16                             | 1            | 4        | 3         | 0 |  |
| Medians (% of LWUs basis) and totals for >10,000 Properties |                         | 550,940                                | 566,530 |         |                              |           |                                    |           | 1,278,200 |            | 13,943  | 39                    |                                  |                        |                  | 213                                | 170.8   |                                      | 2                                     | 7                |                      |                                | 1            | 3        |           |   |  |
| LWUs with 3,001 - 10,000 Properties                         |                         |  |         |         |                              |           |                                    |           |           |            |         |                       |                                  |                        |                  |                                    |   |                                      |                                       |                  |                      |                                |              |          |           |   |  |
| 29  | Armidale Dumaresq       | 8500                                   | 8,550   | 8,660   | 0.98                         | 8,490     | 0.93                               | 0.98      | 7,870     | 20,600     | 239     | 36                    | 1                                | 2                      | 1                | 220                                | 1.9   | 0                                    | 1.7                                   | 0                | 34                   | 2                              | 2            | 3        | 24        | 1 |  |
| 31  | Lithgow                 | 7630                                   | 7,640   | 7,640   | 0.98                         | 7,490     | 0.94                               | 0.98      | 7,020     | 20,900     | 163     | 46                    | 3                                | 36                     | 22               | 156                                | 1.2   | 0                                    | 1.5                                   |                  | 100                  |                                | 1            | 0        | 0         | 0 |  |
| 30A   | Hawkesbury              | 7830                                   | 7,830   | 7,840   | 0.98                         | 7,660     | 0.88                               | 0.99      | 6,830     | 24,000     | 184     | 42                    | 2                                | 24                     | 13               | 46                                 | 0.4   | 0                                    | 2.1                                   | 0                | 81                   | 0                              | 1            | 5        | 1         | 0 |  |
| 30  | Griffith                | 9250                                   | 8,250   | 8,300   | 0.85                         | 7,050     | 0.90                               | 0.84      | 6,240     | 25,400     | 225     | 31                    | 3                                | 29                     | 13               | 61                                 | 0.4   |                                      | 3.1                                   | 5                | 45                   | 0                              | 1            | 0        | 19        | 0 |  |
| 33  | Richmond Valley         | 6960                                   | 7,000   | 6,990   | 0.95                         | 6,640     | 0.90                               | 0.95      | 5,980     | 17,000     | 197     | 34                    | 4                                | 31                     | 16               | 180                                | 1.2   | 20                                   | 2.7                                   |                  | 100                  |                                |              |          |           |   |  |
| 32  | Mid-Western Regional    | 6990                                   | 7,150   | 7,350   | 1.00                         | 7,350     | 0.91                               | 1.00      | 6,680     | 15,500     | 228     | 32                    | 4                                | 14                     | 6                | 98                                 | 0.7   | 100                                  | 1.3                                   | 21               | 100                  | 1                              | 2            | 8        | 36        | 2 |  |
| 34  | Nambucca                | 5980                                   | 6,010   | 6,020   | 0.95                         | 5,720     | 0.91                               | 0.95      | 5,190     | 12,800     | 175     | 33                    | 4                                | 53                     | 30               | 101                                | 0.6   | 0                                    | 1.7                                   | 10               | 60                   | 9                              | 0            | 3        | 0         | 0 |  |
| 35  | Singleton               | 5790                                   | 5,850   | 5,940   | 0.96                         | 5,700     | 0.92                               | 0.93      | 5,080     | 16,000     | 151     | 38                    | 1                                | 15                     | 10               | 96                                 | 0.5   |                                      | 1.9                                   | 28               | 69                   | 20                             | 4            | 3        | 10        | 0 |  |
| 37  | Inverell                | 4830                                   | 4,850   | 4,710   | 0.97                         | 4,570     | 0.96                               | 0.97      | 4,410     | 11,600     | 126     | 36                    | 4                                | 21                     | 17               | 52                                 | 0.2   | 0                                    | 1.5                                   | 14               | 29                   | 0                              | 0            | 0        | 0         | 0 |  |

Table 14: Sewerage - utility characteristics

| WATER UTILITY   |                   | ASSESSMENTS - CONNECTIONS - POPULATION |         |         |                              |         |                                    |         |         |            | ASSETS  |             |                                  |                        |                  |                                    |   | WORKFORCE               |                      |                           |                         |                       |             |          |           |         |         |
|---|-------------------|--|---------|---------|------------------------------|---------|------------------------------------|---------|---------|------------|---------|-------------|----------------------------------|------------------------|------------------|------------------------------------|---|-------------------------|----------------------|---------------------------|-------------------------|-----------------------|-------------|----------|-----------|---------|---------|
|   |                   | Total No of Assessments                |         |         | Connected Properties - Total |         | Connected Properties - Residential |         |         | Population |         | Sewer Mains | Properties Served per km of Main | Sewage Treatment Works | Pumping Stations | Pumping Stations per 100km of Main | Capital Expenditure (Assets, Renewals, Plant/Equip) |                         | Capital Works Grants | Total Work Force          | % Female                | % Undergoing Training | Outsourcing | Injuries | Days Lost |         |         |
|   |                   |  |         |         |                              |         |                                    |         |         |            |         |             |                                  |                        |                  |                                    |   |                         |                      |                           |                         |                       |             |          |           |         |         |
|   |                   | (1)                                    | (2)     | (3) C8  | (4)                          | (5)     | (5a) C6                            | (6) C5  | (7)     | (8) A5     | (9) A6  | (10) A4     | (11)                             | (12)                   | \$/prop          | \$M                                | (\$'000)  | (Employees /1000 props) | (%)                  | (2 or more days per year) | (% of Maintenance Cost) | (No.)                 | Total (%)   | (No.)    | (%)       |         |         |
| 2012/13   | 2013/14           | 2014/15                                | 2014/15 | 2014/15 | 2014/15                      | 2014/15 | 2014/15                            | 2014/15 | 2014/15 | 2014/15    | 2014/15 | 2014/15     | 2014/15                          | 2014/15                | 2014/15          | 2014/15                            | 2014/15   | 2014/15                 | 2014/15              | 2014/15                   | 2014/15                 | 2014/15               | 2014/15     | 2014/15  | 2014/15   | 2014/15 | 2014/15 |
| 41  | Muswellbrook      | 5910                                   | 5,990   | 6,000   | 0.96                         | 5,730   | 0.94                               | 0.96    | 5,410   | 12,900     |         | 176         | 33                               | 2                      | 15               | 9                                  | 267   | 1.5                     |                      | 1.7                       | 20                      | 80                    | 22          | 1        | 6         | 2       | 0       |
| 36  | Parkes            | 5280                                   | 5,290   | 5,340   | 0.95                         | 5,070   | 0.88                               | 0.95    | 4,440   | 12,200     | 130     | 144         | 35                               | 4                      | 2                | 1                                  | 412   | 2.1                     | 505                  | 3.1                       | 6                       | 96                    |             | 0        | 1         | 0       | 0       |
| 42  | Corowa            | 4910                                   | 5,490   | 5,460   | 0.95                         | 5,190   | 0.89                               | 0.95    | 4,600   | 10,100     | 190     | 154         | 34                               | 3                      | 64               | 42                                 | 224   | 1.2                     |                      | 1.9                       | 10                      | 100                   | 0           | 1        | 4         | 1       | 0       |
| 38  | Moree Plains      | 4210                                   | 4,200   | 4,080   | 0.97                         | 3,950   | 0.85                               | 0.96    | 3,340   | 9,800      | 100     | 89          | 44                               | 4                      | 28               | 31                                 | 501   | 2.0                     | 130                  | 1.5                       | 17                      | 100                   | 20          | 2        | 11        | 86      | 6       |
| 44  | Gunnedah          | 3870                                   | 3,850   | 3,850   | 1.03                         | 3,970   | 0.91                               | 1.03    | 3,630   | 9,300      | 120     | 111         | 36                               | 2                      | 3                | 3                                  | 381   | 1.5                     |                      | 1.5                       |                         | 100                   | 5           | 0        | 5         | 8       | 1       |
| 46  | Narrabri          | 4030                                   | 4,020   | 4,040   | 0.98                         | 3,960   | 0.86                               | 0.98    | 3,410   | 12,100     | 100     | 114         | 35                               | 3                      | 22               | 19                                 | 146   | 0.6                     | 0                    | 1.8                       | 0                       | 57                    | 0           | 3        | 0         | 2       | 0       |
| 43  | Tumut             | 4420                                   | 4,440   | 4,450   | 0.95                         | 4,230   | 0.89                               | 0.95    | 3,750   | 8,600      | 130     | 148         | 29                               | 5                      | 20               | 14                                 | 180   | 0.8                     |                      | 1.4                       |                         | 100                   | 0           | 0        | 0         | 0       | 0       |
| 49  | Young             | 3630                                   | 3,650   | 3,670   | 1.04                         | 3,810   | 0.90                               | 1.04    | 3,440   | 8,800      | 110     | 95          | 40                               | 1                      | 5                | 5                                  | 176   | 0.7                     | 412                  | 1.3                       | 20                      | 100                   | 10          | 1        | 4         | 10      | 1       |
| 39  | Cowra             | 3600                                   | 3,730   | 3,730   | 0.95                         | 3,550   | 0.92                               | 0.95    | 3,250   | 8,700      | 110     | 100         | 36                               | 1                      | 7                | 7                                  | 228   | 0.8                     |                      | 1.1                       |                         | 100                   | 0           | 0        | 2         | 0       | 0       |
| 45  | Upper Hunter      | 4610                                   | 4,450   | 4,670   | 0.92                         | 4,290   | 0.91                               | 0.92    | 3,890   | 13,200     | 100     | 118         | 36                               | 4                      | 13               | 11                                 | 234   | 1.0                     | 0                    | 1.7                       | 13                      | 100                   | 3           | 0        | 2         | 0       | 0       |
| 52  | Snowy River       | 3290                                   | 3,310   | 3,400   | 1.43                         | 4,870   | 0.91                               | 1.43    | 4,430   | 4,100      | 390     | 93          | 52                               | 4                      | 18               | 19                                 | 189   | 0.9                     |                      | 1.4                       | 14                      | 72                    | 30          | 0        | 4         | 0       | 0       |
| 51  | Forbes            | 3190                                   | 3,180   | 3,200   | 1.00                         | 3,200   | 0.88                               | 1.00    | 2,830   | 7,900      | 110     | 89          | 36                               | 1                      | 17               | 19                                 | 98  | 0.3                     | 50                   | 1.9                       | 33                      | 67                    | 18          | 0        | 1         | 0       | 0       |
| 50  | Cooma-Monaro      | 3440                                   | 3,430   | 3,460   | 0.95                         | 3,290   | 0.88                               | 0.95    | 2,900   | 7,200      | 140     | 110         | 30                               | 2                      | 7                | 6                                  | 154   | 0.5                     |                      | 2.9                       | 11                      | 100                   | 0           | 0        | 3         | 0       | 0       |
| 53  | Berrigan          | 3420                                   | 3,590   | 3,650   | 0.98                         | 3,580   | 0.88                               | 0.98    | 3,140   | 6,900      | 110     | 109         | 33                               | 4                      | 49               | 45                                 | 13  | 0.0                     | 0                    | 1.5                       | 0                       | 36                    | 0           | 1        | 2         | 4       | 0       |
| 48  | Leeton            | 3480                                   | 3,480   | 3,540   | 0.94                         | 3,330   | 0.87                               | 0.94    | 2,880   | 7,900      | 110     | 101         | 33                               | 3                      | 44               | 44                                 | 463   | 1.5                     |                      | 1.8                       |                         | 67                    | 0           | 0        | 8         | 100     | 7       |
| 54  | Deniliquin        | 3300                                   | 3,310   | 3,380   | 0.96                         | 3,250   | 0.88                               | 0.95    | 2,830   | 6,600      | 170     | 107         | 30                               | 1                      | 24               | 22                                 | 147   | 0.5                     | 0                    | 1.8                       | 0                       | 17                    | 0           | 0        | 1         | 0       | 0       |
| Medians (% of LWUs basis) and totals for 3,000 to 10,000 Properties |                   | 120,520                                | 121,530 |         |                              |         | 286,100                            | 3,362   | 35      |            |         | 178         | 22.6                             |                        |                  |                                    | 2   | 10                      |                      |                           | 0                       | 3                     |             |          |           |         |         |
| LWUs with 1,501 - 3,000 Properties                                  |                   |  |         |         |                              |         |                                    |         |         |            |         |             |                                  |                        |                  |                                    |   |                         |                      |                           |                         |                       |             |          |           |         |         |
| 47  | Bellingen         | 3150                                   | 3,190   | 3,210   | 0.95                         | 3,050   | 0.90                               | 0.95    | 2,740   | 7,900      | 100     | 100         | 31                               | 3                      | 28               | 28                                 | 1,709   | 5.2                     | 1,391                | 2.3                       | 0                       | 100                   | 10          | 0        | 2         | 0       | 0       |
| 60  | Glen Innes Severn | 3080                                   | 3,090   | 3,030   | 0.91                         | 2,760   | 0.87                               | 0.91    | 2,400   | 6,200      | 120     | 111         | 25                               | 2                      | 6                | 5                                  | 187   | 0.5                     |                      | 1.3                       |                         | 100                   | 5           | 0        | 0         | 0       | 0       |
| 58  | Cootamundra       | 2890                                   | 2,880   | 2,880   | 0.98                         | 2,820   | 0.89                               | 0.98    | 2,510   | 5,600      | 130     | 63          | 45                               | 1                      | 4                | 6                                  | 46  | 0.1                     | 0                    | 0.4                       | 0                       | 100                   | 1           | 0        | 12        | 0       | 0       |
| 57  | Wellington        | 2710                                   | 2,700   | 2,700   | 0.98                         | 2,650   | 0.87                               | 0.98    | 2,320   | 6,000      | 150     | 91          | 29                               | 3                      | 13               | 14                                 | 96  | 0.3                     |                      | 1.9                       |                         |                       | 7           | 0        | 0         | 0       | 0       |
| 91  | Cabonne           | 2460                                   | 2,320   | 2,100   | 0.92                         | 1,930   | 0.86                               | 0.92    | 1,670   | 4,400      | 87      | 74          | 26                               | 5                      | 11               | 15                                 | 765   | 1.5                     | 1,374                | 3.6                       | 14                      | 100                   | 10          | 0        | 3         | 0       | 0       |
| 80  | Greater Hume      | 2730                                   | 2,740   | 2,760   | 0.95                         | 2,620   | 0.87                               | 0.95    | 2,270   | 6,000      | 100     | 77          | 34                               | 6                      | 21               | 27                                 | 76  | 0.2                     |                      | 1.3                       |                         | 100                   | 86          | 0        | 15        | 0       | 0       |
| 59  | Lachlan           | 2110                                   | 2,110   | 2,130   | 1.03                         | 2,200   | 0.85                               | 1.03    | 1,870   | 5,000      | 110     | 76          | 29                               | 3                      | 21               | 28                                 | 38  | 0.1                     | 0                    | 1.8                       |                         |                       |             |          |           |         |         |
| 65  | Murray            | 3120                                   | 3,300   | 3,310   | 0.95                         | 3,140   | 0.89                               | 0.95    | 2,790   | 6,800      | 210     | 99          | 32                               | 2                      | 43               | 43                                 | 73  | 0.2                     |                      | 1.1                       |                         | 100                   | 0           | 0        | 0         | 0       | 0       |
| 62  | Narromine         | 2060                                   | 2,060   | 2,060   | 0.95                         | 1,960   | 0.87                               | 0.95    | 1,690   | 5,100      | 130     | 54          | 36                               | 2                      | 13               | 24                                 | 351   | 0.7                     | 0                    | 1.5                       | 33                      | 100                   | 0           | 0        | 0         | 0       | 0       |
| 56  | Yass Valley       | 2430                                   | 2,480   | 2,620   | 0.94                         | 2,470   | 0.91                               | 0.94    | 2,240   | 6,100      | 110     | 80          | 31                               | 1                      | 11               | 14                                 |   |                         |                      | 1.2                       |                         | 67                    | 20          | 0        | 2         | 0       | 0       |
| 61  | Liverpool Plains  | 2110                                   | 2,080   | 2,060   | 0.98                         | 2,020   | 0.91                               | 0.98    | 1,840   | 4,900      | 110     | 58          | 35                               | 2                      | 9                | 16                                 | 43  | 0.1                     | 0                    | 1.5                       | 0                       | 100                   | 0           |          |           |         |         |
| 55  | Warrumbungle      | 2570                                   | 2,560   | 2,560   | 0.99                         | 2,540   | 0.83                               | 0.92    | 1,960   | 4,900      | 100     | 80          | 32                               | 4                      | 9                | 11                                 | 15  | 0.0                     |                      | 3.5                       | 22                      | 100                   | 35          | 0        | 4         | 0       | 0       |
| 69  | Temora            | 2130                                   | 2,150   | 2,160   | 1.00                         | 2,160   | 0.86                               | 1.00    | 1,860   | 4,600      | 150     | 54          | 40                               | 1                      | 4                | 7                                  | 0   | 0.0                     | 0                    | 0.9                       | 0                       | 100                   | 0           | 0        | 3         | 0       | 0       |
| 71  | Palerang          | 2260                                   | 2,200   | 2,220   | 0.95                         | 2,110   | 0.91                               | 0.95    | 1,920   | 5,100      | 100     | 67          | 31                               | 3                      | 15               | 22                                 | 623   | 1.3                     | 75                   | 1.7                       |                         | 57                    | 0           | 0        | 0         | 0       | 0       |
| 72  | Bland             | 1930                                   | 1,930   | 1,940   | 0.95                         | 1,840   | 0.86                               | 0.95    | 1,590   | 3,800      | 110     | 49          | 38                               | 3                      | 10               | 20                                 | 0   | 0.0                     | 0                    | 1.1                       | 0                       | 100                   | 10          | 0        | 0         | 0       | 0       |
| 63  | Narrandera        | 1850                                   | 1,850   | 1,860   | 0.92                         | 1,710   | 0.89                               | 0.92    | 1,510   | 4,800      | 110     | 41          | 42                               | 1                      | 4                | 10                                 | 129   | 0.2                     |                      | 1.8                       |                         |                       |             |          |           |         |         |
| 67  | Cobar             | 1830                                   | 1,830   | 1,830   | 0.95                         | 1,740   | 0.91                               | 0.95    | 1,580   | 5,000      | 120     | 52          | 33                               | 1                      | 5                | 10                                 | 0   | 0.0                     | 0                    | 1.1                       | 0                       | 100                   | 0           | 0        | 0         | 0       | 0       |
| 74  | Wentworth         | 1930                                   | 1,680   | 1,720   | 0.95                         | 1,630   | 0.88                               | 0.95    | 1,440   | 3,500      | 140     | 65          | 25                               | 5                      | 27               | 42                                 | 72  | 0.1                     |                      | 2.5                       |                         | 50                    |             | 0        | 3         | 0       | 0       |
| 75  | Coonamble         | 1350                                   | 1,260   | 1,170   | 1.02                         | 1,190   | 0.82                               | 1.02    | 972     | 4,000      | 150     | 46          | 26                               | 2                      | 12               | 26                                 | 59  | 0.1                     | 0                    | 2.5                       | 0                       | 100                   | 0           | 0        | 0         | 0       | 0       |
| 70  | Kyogle            | 1800                                   | 1,800   | 1,800   | 0.95                         | 1,710   | 0.90                               | 0.95    | 1,530   | 3,600      | 120     | 62          | 28                               | 3                      | 9                | 15                                 | 229   | 0.4                     |                      | 4.1                       | 14                      | 100                   | 10          | 0        | 2         | 0       | 0       |



Table 14: Sewerage - utility characteristics

| WATER UTILITY  |                 | ASSESSMENTS - CONNECTIONS - POPULATION  |         |         |                                  |         |                                    |                           |         |            | ASSETS                 |                                  |                                  |                                  |  |  |   | WORKFORCE |                                   |                  |                                   |                       |             |          |           |         |         |
|--|-----------------|---|---------|---------|----------------------------------|---------|------------------------------------|---------------------------|---------|------------|------------------------|----------------------------------|----------------------------------|----------------------------------|--|--|---|-----------|-----------------------------------|------------------|-----------------------------------|-----------------------|-------------|----------|-----------|---------|---------|
|  |                 | Total No of Assessments                 |         |         | Connected Properties - Total     |         | Connected Properties - Residential |                           |         | Population |                        | Sewer Mains                      | Properties Served per km of Main | Sewage Treatment Works           | Pumping Stations   | Pumping Stations per 100km of Main     | Capital Expenditure (Assets, Renewals, Plant/Equip) |           | Capital Works Grants              | Total Work Force | % Female                          | % Undergoing Training | Outsourcing | Injuries | Days Lost |         |         |
|  |                 |   |         |         |                                  |         |                                    |                           |         |            |                        |                                  |                                  |                                  |  |  |   |           |                                   |                  |                                   |                       |             |          |           |         |         |
|  |                 |   |         |         |                                  |         |                                    |                           |         |            |                        |                                  |                                  |                                  |  |  |   |           |                                   |                  |                                   |                       |             |          |           |         |         |
| (1)  | (2)             | (3) C8                                  | (4)     | (5)     | (5a) C6                          | (6) C5  | (7)                                | (8) A5                    | (9) A6  | (10) A4    | (11)                   | (12)                             | (13) F29                         | (13a) F15                        | (13b) F27  | (14)                                   | (15)  | (16)      | (19)                              | (20)             | (21)                              | (22)                  | (22a)       |          |           |         |         |
| 2012/13  | 2013/14         | 2014/15                                 | 2014/15 | 2014/15 | 2014/15                          | 2014/15 | 2014/15                            | 2014/15                   | 2014/15 | 2014/15    | 2014/15                | 2014/15                          | 2014/15                          | 2014/15                          | 2014/15  | 2014/15                                | 2014/15   | 2014/15   | 2014/15                           | 2014/15          | 2014/15                           | 2014/15               | 2014/15     | 2014/15  | 2014/15   | 2014/15 | 2014/15 |
| 77   | Junee           | 1700                                    | 1,710   | 1,730   | 0.95                             | 1,640   | 0.93                               | 0.95                      | 1,520   | 4,600      | 120                    | 43                               | 38                               | 1                                | 0  | 0                                      | 56  | 0.1       | 0                                 | 1.2              |                                   | 100                   | 20          | 0        | 0         | 0       | 0       |
| 78   | Blayney         | 1930                                    | 1,880   | 1,880   | 1.03                             | 1,940   | 0.85                               | 1.03                      | 1,640   | 3,900      | 100                    | 76                               | 26                               | 1                                | 7  | 9                                      | 184   | 0.4       | 56                                | 1.0              |                                   | 100                   | 8           | 0        | 2         | 0       | 0       |
| 79   | Walgett         | 2000                                    | 1,900   | 1,900   | 0.85                             | 1,620   | 0.94                               | 0.85                      | 1,510   | 6,500      | 180                    | 48                               | 34                               | 3                                | 9  | 19                                     | 128   | 0.2       | 0                                 | 2.5              | 0                                 | 50                    |             | 0        | 0         | 0       | 0       |
| 68   | Tenterfield     | 1800                                    | 1,810   | 1,800   | 0.95                             | 1,710   | 0.85                               | 0.95                      | 1,460   | 3,700      | 99                     | 67                               | 26                               | 2                                | 5  | 7                                      | 409   | 0.7       |                                   | 1.8              |                                   | 100                   | 5           | 0        | 0         | 0       | 0       |
| Medians (% of LWUs basis) and totals for 1,500 to 3,000 Properties |                 | 53,930                                  | 53,430  |         |                                  |         |                                    |                           | 122,000 | 1,633      | 32                     |                                  |                                  |                                  |  |  | 74  | 12.4      |                                   | 2                | 0                                 |                       | 0           | 0        |           |         |         |
| LWUs with 200 - 1,500 Properties                                   |                 |   |         |         |                                  |         |                                    |                           |         |            |                        |                                  |                                  |                                  |  |  |   |           |                                   |                  |                                   |                       |             |          |           |         |         |
| 84   | Gilgandra       | 1400                                    | 1,400   | 1,270   | 0.98                             | 1,240   | 0.88                               | 0.98                      | 1,100   | 3,400      | 120                    | 37                               | 34                               | 1                                | 17   | 46                                     | 69  | 0.1       |                                   | 1.8              |                                   | 44                    |             | 1        | 19        | 23      | 4       |
| 73   | Upper Lachlan   | 1530                                    | 1,530   | 1,530   | 1.00                             | 1,530   | 0.85                               | 1.00                      | 1,310   | 2,800      | 140                    | 56                               | 27                               | 3                                | 8  | 14                                     | 157   | 0.2       | 0                                 | 2.0              | 0                                 | 100                   | 0           | 0        | 0         | 0       | 0       |
| 87   | Bourke          | 1220                                    | 1,220   | 1,210   | 1.00                             | 1,210   | 0.89                               | 1.00                      | 1,080   | 2,100      | 120                    | 34                               | 36                               | 1                                | 8  | 24                                     |   |           |                                   | 2.5              |                                   | 100                   | 0           | 0        | 0         | 0       | 0       |
| 86   | Hay             | 1320                                    | 1,300   | 1,300   | 0.98                             | 1,280   | 0.86                               | 0.98                      | 1,100   | 2,400      | 100                    | 37                               | 35                               | 1                                | 8  | 22                                     | 116   | 0.1       | 0                                 | 1.6              | 0                                 | 100                   | 30          | 0        | 0         | 0       | 0       |
| 83   | Oberon          | 1200                                    | 1,200   | 1,230   | 1.02                             | 1,250   | 0.85                               | 1.02                      | 1,060   | 3,200      | 130                    | 38                               | 33                               | 1                                | 4  | 11                                     | 74  | 0.1       |                                   | 2.4              |                                   | 100                   | 5           | 0        | 0         | 0       | 0       |
| 81   | Gwydir          | 1210                                    | 1,210   | 1,220   | 0.95                             | 1,150   | 0.90                               | 0.95                      | 1,040   | 2,600      | 140                    | 41                               | 28                               | 2                                | 8  | 20                                     | 0   | 0.0       | 0                                 | 2.6              | 33                                | 100                   | 8           | 0        | 0         | 0       | 0       |
| 85   | Uralla          | 1100                                    | 1,110   | 1,120   | 1.00                             | 1,120   | 0.91                               | 1.01                      | 1,040   | 2,500      | 100                    | 35                               | 32                               | 1                                | 6  | 17                                     | 38  | 0.0       |                                   | 1.3              |                                   | 100                   | 5           | 0        | 2         | 0       | 0       |
| 95   | Weddin          | 990                                     | 990     | 1,000   | 0.94                             | 940     | 0.88                               | 0.93                      | 812     | 2,100      | 110                    | 31                               | 30                               | 1                                | 0  | 0                                      | 0   | 0.0       | 0                                 | 1.3              | 0                                 | 100                   | 0           | 0        | 0         | 0       | 0       |
| 89   | Bogan           | 1020                                    | 960     | 950     | 1.01                             | 960     | 0.85                               | 1.01                      | 811     | 2,300      | 150                    | 20                               | 48                               |                                  | 4  | 20                                     |   |           |                                   | 2.1              |                                   | 50                    | 0           | 0        | 0         | 0       | 0       |
| 76   | Harden          | 990                                     | 990     | 990     | 0.95                             | 940     | 0.85                               | 0.94                      | 792     | 2,100      | 100                    | 42                               | 22                               | 1                                | 0  | 0                                      | 11  | 0.0       | 0                                 | 0.5              | 0                                 | 100                   | 0           | 0        | 0         | 0       | 0       |
| 88   | Wakool          | 1060                                    | 1,060   | 1,060   | 0.95                             | 1,010   | 0.86                               | 0.95                      | 863     | 2,100      | 120                    | 47                               | 21                               | 4                                | 14   | 30                                     | 352   | 0.4       |                                   | 5.9              |                                   | 33                    | 10          | 0        | 0         | 0       | 0       |
| 93   | Tumbarumba      | 1040                                    | 1,060   | 1,060   | 0.95                             | 1,000   | 0.87                               | 0.95                      | 873     | 1,700      | 120                    | 47                               | 21                               | 2                                | 3  | 6                                      | 2,335   | 2.3       | 1,477                             | 1.0              | 100                               | 100                   | 0           | 0        | 0         | 0       | 0       |
| 94   | Gundagai        | 900                                     | 960     | 980     | 0.85                             | 830     | 0.86                               | 0.84                      | 707     | 2,400      | 130                    | 73                               | 11                               | 1                                | 5  | 7                                      | 404   | 0.3       |                                   | 2.4              |                                   |                       |             |          |           |         |         |
| 92   | Carrathool      | 880                                     | 880     | 880     | 0.95                             | 830     | 0.85                               | 0.95                      | 711     | 1,900      | 120                    | 23                               | 36                               | 3                                | 11   | 48                                     | 31  | 0.0       | 0                                 | 2.8              | 0                                 | 100                   |             | 0        | 11        | 0       | 0       |
| 96   | Warren          | 880                                     | 860     | 890     | 0.92                             | 820     | 0.89                               | 0.92                      | 729     | 1,800      | 130                    | 17                               | 48                               | 2                                | 8  | 47                                     | 282   | 0.2       |                                   | 2.4              |                                   | 100                   | 0           | 0        | 2         | 0       | 0       |
| 99   | Coolamon        | 1050                                    | 1,060   | 1,070   | 0.95                             | 1,020   | 0.91                               | 0.95                      | 924     | 2,400      | 100                    | 44                               | 23                               | 2                                | 8  | 18                                     | 109   | 0.1       | 0                                 | 1.0              | 0                                 | 50                    | 0           | 0        | 0         | 0       | 0       |
| 102  | Lockhart        | 910                                     | 920     | 920     | 0.95                             | 880     | 0.83                               | 0.95                      | 729     | 1,800      | 100                    | 42                               | 21                               | 3                                | 6  | 14                                     |   |           |                                   | 1.5              |                                   | 100                   | 0           | 0        | 2         | 0       | 0       |
| 98   | Walcha          | 800                                     | 790     | 790     | 1.01                             | 800     | 0.87                               | 1.01                      | 689     | 1,700      | 110                    | 30                               | 27                               | 1                                | 1  | 3                                      | 56  | 0.0       | 0                                 | 2.5              | 50                                | 100                   | 0           | 0        | 0         | 0       | 0       |
| 100  | Balranald       | 900                                     | 900     | 900     | 0.95                             | 850     | 0.86                               | 0.95                      | 735     | 1,600      | 160                    | 38                               | 22                               | 2                                | 10   | 26                                     |   |           |                                   | 1.2              |                                   | 100                   | 0           | 0        | 0         | 0       | 0       |
| 97   | Bombala         | 810                                     | 810     | 810     | 0.95                             | 770     | 0.84                               | 0.95                      | 651     | 1,800      | 110                    | 35                               | 22                               | 2                                | 5  | 14                                     | 51  | 0.0       | 0                                 | 2.6              | 0                                 | 100                   | 0           | 0        | 0         | 0       | 0       |
| 101  | Murrumbidgee    | 770                                     | 770     | 770     | 1.03                             | 790     | 0.94                               | 1.05                      | 760     | 1,600      |                        | 23                               | 34                               | 2                                | 12   | 52                                     | 91  | 0.1       |                                   | 5.1              |                                   |                       |             |          |           |         |         |
| 90   | Guyra           | 1250                                    | 1,240   | 1,260   | 0.95                             | 1,200   | 0.89                               | 0.95                      | 1,070   | 2,400      | 110                    | 57                               | 21                               | 2                                | 2  | 4                                      | 25  | 0.0       | 0                                 | 1.3              | 0                                 |                       | 5           | 0        | 10        | 0       | 0       |
| 104  | Boorowa         | 690                                     | 700     | 700     | 0.94                             | 660     | 0.90                               | 0.94                      | 597     | 1,500      | 430                    | 30                               | 22                               | 1                                | 4  | 13                                     | 247   | 0.2       | 20                                | 2.7              |                                   | 83                    | 28          | 1        | 10        | 18      | 4       |
| 105  | Brewarrina      | 580                                     | 590     | 560     | 0.86                             | 480     | 0.88                               | 0.85                      | 416     | 1,500      | 80                     | 16                               | 30                               | 3                                | 8  | 50                                     | 165   | 0.1       | 250                               | 4.2              | 0                                 | 100                   | 0           | 0        | 0         | 0       | 0       |
| 106  | Jerilderie      | 450                                     | 450     | 450     | 0.95                             | 430     | 0.77                               | 0.95                      | 331     | 780        | 120                    | 12                               | 36                               | 1                                | 5  | 42                                     | 28  | 0.0       |                                   | 2.3              |                                   |                       | 0           | 0        | 0         | 0       | 0       |
| 103  | Central Darling | 230                                     | 380     | 370     | 1.00                             | 370     | 0.92                               | 1.00                      | 339     | 710        | 110                    | 23                               | 16                               | 1                                | 6  | 26                                     | 0   | 0.0       | 0                                 | 2.7              | 0                                 |                       | 0           | 0        | 0         | 0       | 0       |
| 107  | Urana           | 330                                     | 330     | 340     | 0.95                             | 320     | 0.87                               | 0.95                      | 276     | 720        | 200                    | 15                               | 21                               | 2                                | 9  | 60                                     |   |           |                                   | 7.8              | 40                                | 80                    | 0           | 0        | 0         | 0       | 0       |
| Medians (% of LWUs basis) and totals for 200 to 1,500 Properties   |                 | 25,510                                  | 25,630  |         |                                  |         |                                    |                           | 53,910  | 943        | 27                     |                                  |                                  |                                  |  |  | 51  | 4.5       |                                   | 2                | 0                                 |                       | 0           | 0        |           |         |         |
| Median All LWUs (% of LWUs basis)                                  |                 |   |         |         |                                  |         |                                    |                           |         |            |                        | Properties served per km of main |                                  | 34                               |  | Capital Expenditure \$150 per property |   |           |                                   |                  | 1.8 employees per 1000 properties |                       |             |          |           |         |         |
| Median All LWUs (Statewide basis)                                  |                 |   |         |         |                                  |         |                                    |                           |         |            |                        | 38                               |                                  | \$204 per property               |  |  |   |           | 1.6 employees per 1000 properties |                  |                                   |                       |             |          |           |         |         |
| Totals for all LWUs  |                 | Sewerage Assessments 767,000            |         |         | Connected Sge properties 751,000 |         |                                    | Total Sge populaton 1.74M |         |            | 19,880 km of Sge mains |                                  |                                  | Total Capital Expenditure \$210M |  |  | Total Days Lost Due to Injury 1,030                 |           |                                   |                  |                                   |                       |             |          |           |         |         |
| 99 LWUs with Sge services  |                 | Total No. of Sewage Treatment Works 299 |         |         |                                  |         |                                    |                           |         |            | Pumping Stations 3130  |                                  | No. of Sge Employees 1,200       |                                  | Note: Refer also to pages 21, 23 and 27 on employees and employee awareness of training. |  |   |           |                                   |                  |                                   |                       |             |          |           |         |         |



Table 15: Sewerage - asset management and resource management

| WATER UTILITY                 | ASSET MANAGEMENT        |     |                   |                          |     |                   |                                 |     |       |                                 |                               |                                   |               |                                |                                       |                   | RESOURCE MANAGEMENT              |         |        |                             |                     |   |                                   |                                      |    |     |    |       |                        |                    |                   |   |     |                   |                  |     |       |                                     |   |   |        |     |    |    |
|-------------------------------|-------------------------|-----|-------------------|--------------------------|-----|-------------------|---------------------------------|-----|-------|---------------------------------|-------------------------------|-----------------------------------|---------------|--------------------------------|---------------------------------------|-------------------|----------------------------------|---------|--------|-----------------------------|---------------------|---|-----------------------------------|--------------------------------------|----|-----|----|-------|------------------------|--------------------|-------------------|---|-----|-------------------|------------------|-----|-------|-------------------------------------|---|---|--------|-----|----|----|
|                               | Infiltration            |     |                   | Breaks & Chokes          |     |                   | Overflows<br>see also Col (31a) |     |       | Rehabilitations                 |                               | Renewals                          |               | Mains<br>Maintenance<br>Cost   | Overflows<br>Reported to<br>Regulator |                   | Total Vol of<br>Sewage Collected |         |        | Volume of<br>Trade<br>Waste | % Sewage<br>Treated | % Sge<br>Treated that<br>was<br>compliant | STWs<br>compliant<br>at all times | Percentage of Total Sewage Collected |    |     |    |       | Level of Treatment (%) |                    |                   | Vol of Sewage Collected<br>per Property |     |                   | Biosolids Reused |     |       | Effluent Recycled                   |   |   |        |     |    |    |
|                               |                         |     |                   |                          |     |                   |                                 |     |       |                                 |                               |                                   |               |                                |                                       |                   |                                  |         |        |                             |                     |   |                                   |                                      |    |     |    |       |                        |                    |                   |   |     |                   |                  |     |       |                                     |   |   |        |     |    |    |
|                               | (ML per 100km of Main)  |     |                   | (No. per 100 km of Main) |     |                   | (No. per 100 km of Main)        |     |       | Mains (%<br>of Total<br>Length) | Service<br>Connections<br>(%) | (\$'000 per<br>100 km of<br>Main) | (% of<br>CRC) | (\$'000 per 100<br>km of Main) | (No. per 100km of<br>main)            |                   | (Res, NonRes + Trade Waste)      |         |        | (ML)                        | (%)                 |   |                                   |                                      |    |     |    |       | Primary<br>Level       | Secondary<br>Level | Tertiary<br>Level | (kL/property)                           |     |                   | (%)              |     |       | Total<br>Volume<br>Recycled<br>(ML) | Volume<br>Recycled for<br>Urban Water<br>(ML) | % of Total Effluent<br>that is Recycled |        |     |    |    |
|                               | (23)                    |     |                   | (24)<br>A14              |     |                   | (25)                            |     |       | (27)                            | (28)                          | (29)                              | (30)          | (31)                           | (31a)<br>E13                          |                   | (32)<br>W18                      |         |        | (32a)<br>W17                | (33)                | (33a)                                     | (33b)                             |                                      |    |     |    |       | (39a)<br>E1            | (39b)<br>E2        | (39c)<br>E3       | (39)<br>W19                             |     |                   | (40)<br>E8       |     |       | (41a)<br>W26                        | W20+W21+W<br>25-W25.1<br>(41b)                | (41c)<br>W27                            |        |     |    |    |
| 12/13 13/14 14/15             |                         |     | 12/13 13/14 14/15 |                          |     | 12/13 13/14 14/15 |                                 |     | 14/15 | 14/15                           | 14/15                         | 14/15                             | 14/15         | 13/14 14/15                    |                                       | 12/13 13/14 14/15 |                                  |         | 14/15  | 14/15                       | 14/15               | 14/15                                     | 14/15 14/15 14/15 14/15 14/15     |                                      |    |     |    | 14/15 | 14/15                  | 14/15              | 12/13 13/14 14/15 |   |     | 12/13 13/14 14/15 |                  |     | 14/15 | 14/15                               | 12/13 13/14 14/15                             |   |        |     |    |    |
| Sydney Water                  |                         |     |                   | 46                       | 61  | 69                |                                 |     |       |                                 |                               |                                   |               | 0.4 0.4                        |                                       | 496,575           | 469,579                          | 564,424 | 22,817 |                             |                     |   |                                   |                                      |    |     |    |       |                        |                    | 73                | 4                                       | 23  | 277               | 261              | 309 | 100   | 100                                 | 100   | 43,075                                  | 11,800 | 10  | 10 | 8  |
| Hunter Water                  |                         |     |                   | 42                       | 54  | 54                |                                 |     |       |                                 |                               |                                   |               | 0.1 0.1                        |                                       | 68,097            | 64,878                           | 71,838  | 4,702  |                             |                     |   |                                   |                                      |    |     |    |       |                        |                    | 0                 | 53                                      | 47  | 308               | 289              | 316 | 92    | 85                                  | 89  | 4,600                                   | 2,900  | 6   | 8  | 6  |
| LWUs with > 10,000 Properties |                         |     |                   |                          |     |                   |                                 |     |       |                                 |                               |                                   |               |                                |                                       |                   |                                  |         |        |                             |                     |   |                                   |                                      |    |     |    |       |                        |                    |                   |   |     |                   |                  |     |       |                                     |   |   |        |     |    |    |
| 1                             | Gosford                 | 136 | 316               | 38                       | 37  | 39                | 35                              | 35  | 44    | 0.4                             | -                             | 2,167                             | 1.4           | 148                            | 1.7                                   | 1.7               | 15,742                           | 15,592  | 19,436 | 662                         | 100                 | 100                                       | 2 of 2                            | 22                                   | 64 | 11  | 3  |       | 1                      | 97                 | 1                 | 228                                     | 223 | 278               | 100              | 100 | 100   | 19                                  | 19  | 0                                       | 0      | 0   |    |    |
| 2                             | Wyong                   |     |                   | 46                       | 54  | 49                | 30                              | 37  | 51    | 0.6                             | -                             | 802                               | 0.9           | 139                            | 2.1                                   | 5.6               | 16,287                           | 14,835  | 16,051 |                             | 100                 | 100                                       | 6 of 6                            |                                      | 75 | 25  |    |       |                        | 95                 | 5                 | 273                                     | 246 | 259               | 100              | 100 | 100   | 759                                 | 521   | 6                                       | 6      | 5   |    |    |
| 3                             | Shoalhaven              | 67  | 70                | 63                       | 14  | 8                 | 11                              | 28  | 23    | 20                              | 0.2                           | 0.3                               | 73            | 0.1                            | 26                                    | 0.9               | 0.8                              | 7,488   | 8,384  | 9,387                       | 192                 | 88  | 94                                | 12 of 13                             | 8  | 76  | 13 | 2     | 1                      |                    |                   | 88                                      | 182 | 200               | 224              | 100 | 100   | 100                                 | 1,705   | 178                                     | 27     | 32  | 21 |    |
| 5                             | MidCoast                | 63  | 21                | 54                       | 6   | 6                 | 6                               | 4   | 4     | 6                               | 0.3                           | -                                 | 258           | 0.4                            | 92                                    | 0.5               | 1.3                              | 6,555   | 5,658  | 6,850                       | 309                 | 100                                       | 98                                | 11 of 13                             | 9  | 71  | 15 | 5     |                        |                    | 18                | 82                                      | 188 | 161               | 195              | 100 | 100   | 100                                 | 941   | 412                                     | 13     | 25  | 14 |    |
| 6                             | Tweed                   | 205 | 62                | 191                      | 2   | 1                 | 0                               | 9   | 7     | 5                               | 0.6                           | 0.0                               | 457           | 0.4                            | 205                                   | 1.6               | 0.4                              | 7,906   | 6,704  | 8,105                       | 264                 | 99  | 100                               | 5 of 8                               | 17 | 58  | 22 | 3     |                        |                    | 1                 | 98                                      | 263 | 221               | 263              | 100 | 87    | 100                                 | 551   | 500                                     | 5      | 9   | 7  |    |
| 7                             | Port Macquarie-Hastings | 316 | 218               | 144                      | 25  | 30                | 16                              | 24  | 29    | 21                              | 0.1                           | 0.0                               | 406           | 0.7                            | 64                                    | 0.6               | 1.0                              | 8,706   | 8,476  | 7,850                       |                     | 100                                       | 100                               | 5 of 5                               | 13 | 81  | 6  |       |                        |                    | 0                 | 100                                     | 319 | 308               | 282              | 100 | 100   | 100                                 | 386   | 299                                     | 3      | 4   | 5  |    |
| 9                             | Wagga Wagga             | 10  | 15                | 8                        | 88  | 80                | 80                              | 32  | 26    | 27                              | 0.5                           | 0.8                               | 144           | 0.3                            | 99                                    | 0.8               | 0.3                              | 5,734   | 5,723  | 5,822                       | 847                 | 100                                       | 100                               | 6 of 6                               | 1  | 85  |    | 15    |                        |                    | 3                 | 97                                      | 220 | 218               | 214              | 100 | 100   | 100                                 | 5,620   | 249                                     | 97     | 97  | 97 |    |
| 10                            | Coffs Harbour           |     |                   |                          | 65  | 76                | 89                              | 18  | 9     | 7                               | 0.7                           | 0.2                               | 23            | 0.0                            | 189                                   | 1.0               | 3.0                              | 6,878   | 5,370  | 7,360                       |                     | 100                                       | 100                               | 5 of 5                               |    | 100 |    |       |                        |                    |                   | 100                                     | 294 | 228               | 310              | 100 | 100   | 100                                 | 1,013   | 309                                     | 11     | 27  | 14 |    |
| 11                            | Albury                  |     |                   |                          | 67  | 75                | 65                              | 117 | 2     | 1                               | 0.7                           | 0.0                               |               |                                | 129                                   | 1.9               | 1.3                              | 4,624   | 4,477  | 4,440                       | 284                 | 100                                       | 63                                | 2 of 4                               |    | 72  | 22 | 6     |                        |                    | 0                 | 100                                     | 214 | 204               | 185              |     | -     | 2,398                               |   | 59                                      | 55     | 54  |    |    |
| 13                            | Tamworth Regional       |     |                   |                          | 77  | 74                | 50                              | 11  | 11    | 8                               | 0.0                           | 0.0                               | 99            | 0.2                            | 151                                   | 0.0               | 0.0                              | 5,396   | 4,742  | 5,209                       | 1,077               | 100                                       | 100                               | 3 of 4                               |    | 47  | 32 | 21    |                        |                    | 100               |   |     | 282               | 245              | 265 | 99    | 100                                 | 100   | 4,278                                   |        | 79  | 87 | 82 |
| 15                            | Eurobodalla             | 163 | 241               | 270                      | 29  | 30                | 32                              | 8   | 12    | 9                               | 2.1                           | 0.0                               | 480           | 0.6                            | 50                                    | 8.3               | 8.2                              | 3,161   | 3,141  | 3,477                       | 76                  | 100                                       | 100                               | 5 of 5                               | 41 | 47  | 10 | 2     |                        | 1                  | 5                 | 95                                      | 176 | 174               | 193              |     | 33    | 69                                  | 243   | 223                                     | 6      | 7   | 7  |    |
| 17                            | Queanbeyan              | 104 | 111               | 90                       | 52  | 55                | 61                              | 1   | 43    | 43                              | 0.0                           | 0.0                               | 32            | 0.0                            | 78                                    | 0.9               | 0.9                              | 2,965   | 3,596  | 3,675                       | 260                 | 100                                       | 100                               | 1 of 1                               | 8  | 76  | 9  | 7     |                        |                    |                   | 100                                     | 182 | 216               | 213              |     | -     | 0                                   |   | 1                                       | 1      | 0   |    |    |
| 19                            | Orange                  | 134 | 105               | 67                       | 15  | 24                | 33                              | 5   | 12    | 20                              | 0.7                           | 0.1                               | 109           | 0.2                            | 96                                    | 0.9               | 0.4                              | 4,088   | 3,773  | 3,929                       | 206                 | 92  | 100                               | 2 of 2                               | 8  | 66  | 22 | 5     |                        | 0                  | 1                 | 91                                      | 252 | 229               | 237              | 100 | 100   |                                     | 2,826   | 2,826                                   | 41     | 78  | 78 |    |
| 18                            | Dubbo                   | 18  | 40                | 1                        | 43  | 42                | 46                              | 4   | 2     | 6                               | 0.5                           | 0.0                               | 293           | 0.5                            |                                       |                   | 1.0                              | 2,795   | 2,796  | 2,799                       | 140                 | 99  | 100                               | 2 of 2                               |    | 64  | 31 | 5     |                        |                    |                   | 99                                      | 176 | 175               | 170              | 100 | 100   | 100                                 | 2,183   |   | 83     | 71  | 79 |    |
| 16                            | Wingecarribee           | 91  | 91                | 321                      | 44  | 46                | 22                              | 36  | 31    | 38                              | 0.7                           | 0.0                               | 168           | 0.3                            | 153                                   | 0.7               | 5.0                              | 4,142   | 3,504  | 5,202                       | 148                 | 100                                       | 96                                | 4 of 6                               | 34 | 49  | 14 | 3     |                        | 0                  | 0                 | 99                                      | 282 | 225               | 331              |     | -     | 163                                 |   | 2                                       | 4      | 3   |    |    |
| 14                            | Clarence Valley         | 89  | 51                | 57                       | 43  | 45                | 52                              | 20  | 17    | 23                              | 0.2                           | 0.1                               | 116           | 0.2                            | 107                                   | 0.0               | 0.5                              | 3,306   | 2,525  | 2,856                       | 52                  | 100                                       | 92                                | 2 of 6                               | 8  | 81  | 9  | 2     |                        |                    |                   | 100                                     | 226 | 172               | 194              | 40  | 58    | 97                                  | 195   | 195                                     | 4      | 7   | 7  |    |
| 21                            | Bathurst Regional       | 18  | 18                | 18                       | 58  | 84                | 99                              | 28  | 62    | 63                              | 0.0                           | 0.0                               | 387           | 0.8                            | 235                                   | 0.0               | 0.0                              | 4,662   | 4,613  | 4,116                       | 452                 | 91  | 100                               | 1 of 1                               | 2  | 53  | 35 | 11    |                        |                    |                   | 91                                      | 308 | 299               | 259              | 100 | 100   | 100                                 | 3,712   |   | 100    | 100 | 99 |    |
| 24                            | Ballina                 | 108 |                   | 274                      | 8   | 20                | 3                               | 2   | 2     | 2                               | 0.6                           | 0.0                               | 376           | 0.5                            | 166                                   | 0.0               | 0.6                              | 4,554   | 2,952  | 5,401                       | 82                  | 100                                       | 79                                | 1 of 3                               | 17 | 82  |    | 2     |                        |                    |                   | 100                                     | 331 | 212               | 383              | 100 | 100   | 100                                 | 517   | 517                                     | 3      | 9   | 10 |    |
| 22                            | Lismore                 | 337 | 226               | 309                      | 55  | 49                | 50                              | 0   | 1     | 1                               | 2.5                           | 2.8                               | 1,208         | 1.4                            | 221                                   | 1.4               | 0.6                              | 4,550   | 3,743  | 4,008                       | 120                 | 98  | 68                                | 1 of 3                               | 28 | 52  | 18 | 3     |                        | 5                  |                   | 93                                      | 359 | 293               | 313              |     | -     | 5                                   |   | 1                                       | 1      | 0   |    |    |
| 23                            | Bega Valley             |     |                   |                          | 9   | 22                | 9                               | 9   | 23    | 7                               | 1.2                           | 0.3                               | 432           | 0.6                            | 100                                   | 0.0               | 0.0                              | 1,890   | 2,105  | 2,244                       |                     | 100                                       | 92                                | 8 of 10                              |    | 75  | 24 |       | 1                      |                    | 61                | 39                                      | 156 | 173               | 184              |     | -     | 446                                 | 367   | 38                                      | 30     | 20  |    |    |
| 27                            | Byron                   | 479 | 190               | 170                      | 32  | 11                | 11                              | 9   | 2     | 6                               | 0.0                           | 0.0                               | 153           | 0.2                            | 127                                   | 1.6               | 2.0                              | 3,804   | 3,152  | 3,098                       | 315                 | 100                                       | 97                                | 2 of 4                               | 14 | 53  | 23 | 10    |                        |                    |                   | 100                                     | 367 | 300               | 291              | 100 | 100   | 100                                 | 444   | 288                                     | 13     | 16  | 14 |    |
| 26                            | Essential Energy        |     |                   |                          | 128 | 115               | 129                             | 5   | 4     | 4                               | 0.8                           | 0.0                               | 424           |                                | 363                                   | 0.0               | 0.0                              | 1,366   | 1,380  | 1,35,                       |                     |   |                                   |                                      |    |     |    |       |                        |                    |                   |   |     |                   |                  |     |       |                                     |   |   |        |     |    |    |

Table 15: Sewerage - asset management and resource management

| WATER UTILITY  |                   | ASSET MANAGEMENT       |                   |     |                          |                   |     |                                 |       |       |                                 |                               |                                   |               |                                | RESOURCE MANAGEMENT        |                                       |                             |                                  |       |       |                             |                     |   |                                   |                                      |    |    |       |                  |                        |                   |               |   |                   |     |                  |       |                                     |   |   |              |   |
|--|-------------------|------------------------|-------------------|-----|--------------------------|-------------------|-----|---------------------------------|-------|-------|---------------------------------|-------------------------------|-----------------------------------|---------------|--------------------------------|----------------------------|---------------------------------------|-----------------------------|----------------------------------|-------|-------|-----------------------------|---------------------|---|-----------------------------------|--------------------------------------|----|----|-------|------------------|------------------------|-------------------|---------------|---|-------------------|-----|------------------|-------|-------------------------------------|---|---|--------------|---|
|  |                   | Infiltration           |                   |     | Breaks & Chokes          |                   |     | Overflows<br>see also Col (31a) |       |       | Rehabilitations                 |                               | Renewals                          |               | Mains<br>Maintenance<br>Cost   |                            | Overflows<br>Reported to<br>Regulator |                             | Total Vol of<br>Sewage Collected |       |       | Volume of<br>Trade<br>Waste | % Sewage<br>Treated | % Sge<br>Treated that<br>was<br>compliant | STWs<br>compliant<br>at all times | Percentage of Total Sewage Collected |    |    |       |                  | Level of Treatment (%) |                   |               | Vol of Sewage Collected<br>per Property |                   |     | Biosolids Reused |       |                                     | Effluent Recycled                             |   |              |   |
|  |                   |                        |                   |     |                          |                   |     |                                 |       |       |                                 |                               |                                   |               |                                |                            |                                       |                             |                                  |       |       |                             |                     |   |                                   |                                      |    |    |       |                  |                        |                   |               |   |                   |     |                  |       |                                     |   |   |              |   |
|  |                   | (ML per 100km of Main) |                   |     | (No. per 100 km of Main) |                   |     | (No. per 100 km of Main)        |       |       | Mains (%<br>of Total<br>Length) | Service<br>Connections<br>(%) | (\$'000 per<br>100 km of<br>Main) | (% of<br>CRC) | (\$'000 per 100<br>km of Main) | (No. per 100km of<br>main) |                                       | (Res, NonRes + Trade Waste) |                                  |       | (ML)  | (%)                         |                     |   |                                   |                                      |    |    |       | Primary<br>Level | Secondary<br>Level     | Tertiary<br>Level | (kL/property) |   |                   | (%) |                  |       | Total<br>Volume<br>Recycled<br>(ML) | Volume<br>Recycled for<br>Urban Water<br>(ML) | % of Total Effluent<br>that is Recycled |              |   |
|  |                   | (23)                   |                   |     | (24)<br>A14              |                   |     | (25)                            |       |       | (27)                            | (28)                          | (29)                              | (30)          | (31)                           |                            | (31a)<br>E13                          |                             | (32)<br>W18                      |       |       | (32a)<br>W17                | (33)                | (33a)                                     | (33b)                             | (34) (35) (36) (37) (38)             |    |    |       |                  | (39a)<br>E1            | (39b)<br>E2       | (39c)<br>E3   | (39)<br>W19                             |                   |     | (40)<br>E8       |       |                                     | (41a)<br>W26                                  | (41b)<br>W20+W21+W<br>25-W25.1          | (41c)<br>W27 |   |
| 12/13 13/14 14/15  |                   |                        | 12/13 13/14 14/15 |     |                          | 12/13 13/14 14/15 |     |                                 | 14/15 | 14/15 | 14/15                           | 14/15                         | 14/15                             |               | 13/14 14/15                    |                            | 12/13 13/14 14/15                     |                             |                                  | 14/15 | 14/15 | 14/15                       | 14/15               | 14/15 14/15 14/15 14/15 14/15             |                                   |                                      |    |    | 14/15 | 14/15            | 14/15                  | 12/13 13/14 14/15 |               |   | 12/13 13/14 14/15 |     |                  | 14/15 | 14/15                               | 12/13 13/14 14/15                             |   |              |   |
| 42   | Corowa            | 23                     | 23                | 23  | 33                       | 36                | 23  | 11                              | 3     | 6     | 0.0                             | 0.3                           | 357                               | 1.1           | 118                            | 0.0                        | 0.6                                   | 856                         | 871                              | 883   | 14    | 100                         | 100                 | 3 of 3                                    | 4                                 | 79                                   | 15 | 2  |       | 69               | 31                     | 183               | 167           | 170                                     |                   | 100 | 100              | 184   |                                     | 45  | 19                                      | 21           |   |
| 38   | Moree Plains      | 105                    | 101               | 101 | 41                       | 52                | 46  | 0                               | 7     | 6     | 0.0                             | 0.5                           | 2,222                             | 3.5           | 393                            | 0.0                        | 0.0                                   | 1,190                       | 1,405                            | 1,391 | 170   | 98                          | 100                 | 4 of 4                                    | 6                                 | 79                                   | 3  | 12 | 1     | 4                | 92                     | 292               | 344           | 352                                     | -                 | -   | 793              | 322   | 69                                  | 69  | 58                                      |              |   |
| 44   | Gunnedah          | 45                     | 45                | 45  | 24                       | 32                | 20  | 24                              | 43    | 34    | 1.8                             | 0.3                           | 227                               | 0.5           | 179                            | 0.0                        | 0.0                                   | 692                         | 695                              | 753   |       | 84                          | 100                 | 2 of 2                                    | 7                                 | 68                                   | 25 |    | 4     | 80               |                        | 174               | 176           | 190                                     | -                 | -   | 603              |       | 100                                 | 85  | 96                                      |              |   |
| 46   | Narrabri          |                        | 8                 |     | 125                      | 0                 | 57  | 2                               | 8     | 2     | 1.8                             | 0.7                           |                                   |               | 134                            | 0.0                        | 0.9                                   | 852                         | 721                              | 757   | 0     | 100                         | 71                  | 2 of 3                                    | 1                                 | 65                                   | 33 | 1  |       | 20               | 83                     | 216               | 183           | 191                                     | 56                | -   | 74               | 432   |                                     | 4   | 68                                      | 55           |   |
| 43   | Tumut             |                        |                   |     | 43                       | 44                | 51  | 26                              | 22    | 3     | 1.4                             | 0.1                           | 291                               | 0.9           | 236                            |                            |                                       | 839                         | 924                              | 881   |       | 100                         | 97                  | 3 of 5                                    |                                   | 100                                  |    |    |       | 100              | 200                    | 219               | 208           | -                                       | -                 | 101 | 94               | 15    | 12                                  | 11  |   |              |   |
| 49   | Young             | 32                     | 32                | 41  | 59                       | 51                | 80  | 15                              | 8     | 8     | 2.1                             | 0.7                           | 271                               | 0.5           | 104                            | 8.4                        | 7.4                                   | 695                         | 510                              | 549   | 44    | 100                         | 83                  | 0 of 1                                    | 7                                 | 65                                   | 20 | 8  |       |                  | 100                    | 184               | 134           | 144                                     | -                 | -   | 180              | 176   | 14                                  | 21  | 33                                      |              |   |
| 39   | Cowra             |                        |                   |     | 125                      | 148               | 157 | 0                               | 0     | 0     | 8.0                             | 0.2                           | 779                               | 1.6           | 233                            | 0.0                        | 0.0                                   | 673                         | 565                              | 552   |       | 100                         | 50                  | 0 of 1                                    |                                   | 100                                  |    |    |       | 100              | 197                    | 160               | 156           | -                                       | -                 | 0   |                  | 0     | 0                                   | 0   |   |              |   |
| 45   | Upper Hunter      | 115                    | 98                | 92  | 25                       | 15                | 10  | 6                               | 0     | 7     | 0.8                             | 0.3                           | 850                               | 1.5           | 319                            | 0.0                        | 0.0                                   | 1,062                       | 1,092                            | 900   | 9     | 100                         | 100                 | 4 of 4                                    | 12                                | 80                                   | 7  | 1  |       | 100              |                        | 251               | 267           | 210                                     | -                 | -   | 126              | 125   | 1                                   | 1   | 14                                      |              |   |
| 52   | Snowy River       |                        |                   | 32  | 41                       | 15                | 33  | 0                               | 0     | 0     | 2.2                             | 1.0                           | 242                               | 0.3           | 51                             | 0.0                        | 1.1                                   | 608                         | 441                              | 516   |       | 100                         | 81                  | 1 of 4                                    | 6                                 | 60                                   | 34 |    |       | 100              | 129                    | 93                | 106           | -                                       | -                 | 39  | 39               | 5     | 11                                  | 8   |   |              |   |
| 51   | Forbes            | 45                     | 36                | 29  | 91                       | 79                | 70  | 7                               | 18    | 0     | 0.0                             | 0.7                           | 351                               | 0.7           | 419                            | 0.0                        | 0.0                                   | 741                         | 684                              | 663   | 42    | 91                          | 100                 | 1 of 1                                    | 4                                 | 58                                   | 29 | 6  | 3     |                  |                        | 91                | 232           | 215                                     | 207               | -   | -                | 9     |                                     | 82  | 1                                       | 1            |   |
| 50   | Cooma-Monaro      |                        |                   |     | 17                       | 77                | 35  | 177                             | 200   | 121   | 0.0                             | 0.1                           | 282                               | 0.6           | 10                             | 0.0                        | 0.0                                   | 735                         | 586                              | 782   |       | 100                         | 100                 | 2 of 2                                    |                                   | 100                                  |    |    | 4     | 96               | 225                    | 180               | 238           | -                                       | -                 | 5   |                  | 25    | 32                                  | 1   |   |              |   |
| 53   | Berrigan          | 47                     | 57                | 69  | 97                       | 77                | 84  | 6                               | 6     | 9     | 0.0                             | 0.3                           | 41                                | 0.1           |                                | 0.0                        | 0.0                                   | 607                         | 640                              | 695   |       | 100                         | 100                 | 4 of 4                                    | 11                                | 79                                   | 10 |    | 8     |                  | 100                    | 181               | 182           | 194                                     | -                 | -   | 590              | 590   | 18                                  | 86  | 79                                      |              |   |
| 48   | Leeton            | 15                     | 10                | 10  | 36                       | 25                | 19  | 5                               | 0     | 0     | 9.9                             | 14.1                          | 1,441                             | 2.6           | 185                            | 0.0                        | 0.0                                   | 970                         | 652                              | 831   | 106   | 100                         | 100                 | 3 of 3                                    | 1                                 | 82                                   | 5  | 13 |       | 2                | 98                     | 297               | 199           | 249                                     | 100               | 100 | 100              | 0     |                                     | 2   | 2                                       | 0            |   |
| 54   | Deniliquin        | 41                     | 41                | 42  | 28                       | 28                | 28  | 0                               | 0     | 0     | 0.0                             | 0.0                           | 361                               | 0.7           | 128                            | 0.0                        | 0.0                                   | 571                         | 563                              | 565   |       | 85                          | 100                 | 1 of 1                                    | 8                                 | 85                                   | 7  |    |       | 85               |                        | 180               | 177           | 174                                     | -                 | -   | 54               |       | 0                                   | 11  | 11                                      |              |   |
| Medians (% of LWUs basis)<br>for 1,500 to 3,000 Properties |                   | 47                     | 41                | 42  | 41                       | 36                | 46  | 8                               | 8     | 7     | 0.7                             | 0.3                           | 287                               | 0.6           | 179                            | 0.0                        | 0.0                                   |                             |                                  |       |       |                             |                     |   |                                   |                                      |    |    |       |                  |                        | 220               | 194           | 200                                     | Total Vol         |     |                  | 5,749 |                                     | 11  | 14                                      | 11           |   |
| LWUs with 1,501 - 3,000 Properties                         |                   |                        |                   |     |                          |                   |     |                                 |       |       |                                 |                               |                                   |               |                                |                            |                                       |                             |                                  |       |       |                             |                     |   |                                   |                                      |    |    |       |                  |                        |                   |               |   |                   |     |                  |       |                                     |   |   |              |   |
| 47   | Bellingen         | 147                    | 62                | 76  | 25                       | 20                | 22  | 10                              | 3     | 2     | 0.0                             | 0.6                           | 221                               | 0.4           | 98                             | 2.2                        | 1.0                                   | 735                         | 617                              | 764   | 79    | 100                         | 100                 | 3 of 3                                    | 10                                | 79                                   |    | 10 | 1     |                  |                        | 100               | 245           | 204                                     | 250               | 3   | 59               | 31    | 0                                   |   | 0                                       | 0            | 0 |
| 60   | Glen Innes Severn | 204                    | 180               | 59  | 245                      | 94                | 47  | 245                             | 94    | 47    | 2.7                             | 0.0                           | 438                               | 2.2           | 41                             | 2.7                        | 0.0                                   | 613                         | 613                              | 526   | 10    | 100                         | 100                 | 2 of 2                                    | 13                                | 78                                   | 8  | 2  |       | 4                | 96                     | 219               | 218           | 191                                     | 100               | 100 | 100              | 0     |                                     | 12  | 12                                      | 0            |   |
| 58   | Cootamundra       | 190                    | 159               | 159 | 141                      | 240               | 210 | 6                               | 8     | 10    | 0.0                             | 0.4                           |                                   |               | 189                            | 0.0                        | 6.3                                   | 642                         | 527                              | 496   | 5     | 100                         | 100                 | 1 of 1                                    | 20                                | 65                                   | 14 | 1  |       |                  | 100                    | 227               | 187           | 176                                     | -                 | -   | 486              | 138   | 25                                  | 84  | 98                                      |              |   |
| 57   | Wellington        | 5                      | 5                 | 52  | 24                       | 24                | 31  | 0                               | 0     | 0     | 0.0                             | 0.0                           | 279                               | 0.7           | 142                            | 0.0                        | 0.0                                   | 555                         | 555                              | 554   |       | 100                         | 100                 | 2 of 2                                    | 9                                 | 82                                   | 10 |    |       | 100              |                        | 209               | 209           | 209                                     |                   | -   | 0                |       | 0                                   | 0   | 0                                       |              |   |
| 91   | Cabonne           | 36                     | 18                |     | 19                       | 32                | 22  | 0                               | 35    | 3     | 2.7                             | 0.3                           |                                   |               | 43                             | 0.0                        | 0.0                                   | 329                         | 297                              | 297   |       | -                           | 0                   | 5 of 6                                    | -                                 | -                                    | -  | -  | -     |                  |                        | 146               | 139           | 154                                     | 97                | -   | 100              | 108   |                                     | 49  | 37                                      | 37           |   |
| 80   | Greater Hume      | 48                     | 19                | 23  | 7                        | 14                | 10  | 0                               | 0     | 0     | 0.0                             | 0.1                           | 165                               | 0.3           | 14                             | 0.0                        | 0.0                                   | 455                         | 448                              | 406   |       | 100                         | 100                 | 6 of 6                                    | 4                                 | 80                                   | 15 | 1  |       |                  | 100                    | 176               | 172           | 155                                     | -                 | -   | 61               | 61    | 12                                  | 13  | 15                                      |              |   |
| 59   | Lachlan           | 28                     | 12                |     | 62                       | 62                | -   | 0                               | 0     |       | -                               | -                             | 109                               | 0.2           | 84                             | 0.0                        |                                       | 488                         | 484                              | 484   |       | -                           | 0                   | 2 of 2                                    | -                                 | -                                    | -  | -  | -     |                  |                        | 225               | 223           | 220                                     | 100               | 100 | 116              |       | 24                                  | 24  | 24                                      |              |   |
| 65   | Murray            | 30                     | 30                | 22  | 5                        | 12                | 16  | 0                               | 0     | 0     | 0.0                             | 0.4                           | 192                               | 0.8           | 51                             | 0.0                        | 0.0                                   | 680                         | 685                              | 573   | 116   | 100                         | 100                 | 2 of 2                                    | 4                                 | 60                                   | 15 | 20 | 1     |                  |                        | 100               | 230           | 219                                     | 182               | -   | -                | 90    |                                     | 66  | 33                                      | 16           |   |
| 62   | Narromine         |                        |                   |     | 4                        | 24                | 24  | 0                               | 0     | 0     | 3.7                             | 0.0                           | 1,157                             | 2.2           | 69                             | 0.0                        | 0.0                                   | 583                         | 328                              | 362   |       | 100                         | 100                 | 2 of 2                                    |                                   | 100                                  |    |    |       | 100              |                        | 298               | 167           | 185                                     | -                 | -   | 0                |       | 5                                   | 5   | 0                                       |              |   |
| 56   | Yass Valley       | 39                     | 15                | 40  | 41                       | 32                | 29  | 4                               | 3     | 0     | 0.0                             | 0.4                           |                                   |               |                                | 0.0                        | 0.0                                   | 492                         | 474                              | 474   | 27    | 100                         | 100                 | 1 of 1                                    | 7                                 | 69                                   | 18 | 6  |       | 100              |                        | 216               | 203           | 192                                     | 100               | 100 | 100              | 0     |                                     | 0   | 0                                       | 0            |   |
| 61   | Liverpool Plains  | 34                     | 33                | 16  | 26                       | 17                | 26  | 9                               | 0     | 3     | 6.9                             | 0.5                           | 131                               | 0.3           | 36                             | 6.9                        |                                       |                             |                                  |       |       |                             |                     |   |                                   |                                      |    |    |       |                  |                        |                   |               |   |                   |     |                  |       |                                     |   |   |              |   |



Table 15: Sewerage - asset management and resource management

| WATER UTILITY  | ASSET MANAGEMENT       |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       | RESOURCE MANAGEMENT |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   |   |       |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
|--|------------------------|--------------------------|--------------------------|---------------------------------|-------------------------------|-----------------------------------|---------------------------------|--------------------------------|----------------------------|-----------------------------|-------|----------|-------|------------------------------|--|---------------------------------------|---------------------|------------------------------------|-------------|-------------------------|-----------------------------|---------------------|---|-----------------------------------|--------------------------------------|--------------------|-------------------|---------------|-------|-------------------------------------|---|---|---|-------|-------|------------------|-------|----------------------|-------------------|-----------|-----|-----|---|--|---|---|---|--|--|--|--|--|-----------|--|--|--|--|
|  | Infiltration           |                          |                          | Breaks & Chokes                 |                               |                                   | Overflows<br>see also Col (31a) |                                |                            | Rehabilitations             |       | Renewals |       | Mains<br>Maintenance<br>Cost |  | Overflows<br>Reported to<br>Regulator |                     | Total Vol of<br>Sewage Collected   |             |                         | Volume of<br>Trade<br>Waste | % Sewage<br>Treated | % Sge<br>Treated that<br>was<br>compliant | STWs<br>compliant<br>at all times | Percentage of Total Sewage Collected |                    |                   |               |       | Level of Treatment (%)              |   |   | Vol of Sewage Collected<br>per Property       |       |       | Biosolids Reused |       |                      | Effluent Recycled |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
|  |                        |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   |   |       |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
|  | (ML per 100km of Main) | (No. per 100 km of Main) | (No. per 100 km of Main) | Mains (%<br>of Total<br>Length) | Service<br>Connections<br>(%) | (\$'000 per<br>100 km of<br>Main) | (% of<br>CRC)                   | (\$'000 per 100<br>km of Main) | (No. per 100km of<br>main) | (Res, NonRes + Trade Waste) | (ML)  | (%)      | (%)   | (%)                          | (ML)   | (32a)<br>W17                          | (33)                | (33a)                              | (33b)       | Infiltration<br>/inflow | Res                         | Non-Res             | Trade<br>Waste                            | Other                             | Primary<br>Level                     | Secondary<br>Level | Tertiary<br>Level | (kL/property) | (%)   | Total<br>Volume<br>Recycled<br>(ML) | Volume<br>Recycled for<br>Urban Water<br>(ML) | % of Total Effluent<br>that is Recycled |   |       |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| (23)   | (24)<br>A14            | (25)                     | (27)                     | (28)                            | (29)                          | (30)                              | (31)                            | (31a)<br>E13                   | (32)<br>W18                | (32a)<br>W17                | (33)  | (33a)    | (33b) | (34)                         | (35)   | (36)                                  | (37)                | (38)                               | (39a)<br>E1 | (39b)<br>E2             | (39c)<br>E3                 | (39)<br>W19         | (40)<br>E8                                | (41a)<br>W26                      | (41b)<br>W20+W21+W<br>25-W25.1       | (41c)<br>W27       |                   |               |       |                                     |   |   |   |       |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 12/13  | 13/14                  | 14/15                    | 12/13                    | 13/14                           | 14/15                         | 12/13                             | 13/14                           | 14/15                          | 14/15                      | 14/15                       | 14/15 | 14/15    | 13/14 | 14/15                        | 12/13  | 13/14                                 | 14/15               | 14/15                              | 14/15       | 14/15                   | 14/15                       | 14/15               | 14/15                                     | 14/15                             | 14/15                                | 14/15              | 12/13             | 13/14         | 14/15 | 12/13                               | 13/14   | 14/15                                   | 14/15   | 14/15 | 12/13 | 13/14            | 14/15 |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| LWUs with 200 - 1,500 Properties                         |                        |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   |   |       |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 84   | Gilgandra              | 139                      | 70                       | 71                              | 50                            | 35                                | 41                              | 3                              | 3                          | 11                          | 0.0   | 0.0      | 138   | 0.3                          | 124  | 0.0                                   | 0.0                 | 310                                | 257         | 238                     |                             | 100                 | 100                                       | 1 of 1                            | 11                                   | 70                 | 19                |               |       | 100                                 | 226   | 188                                     | 192   | -     | 238   |                  | 50    | 100                  | 100               |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 73   | Upper Lachlan          | 541                      | 304                      | 214                             | 14                            | 9                                 | 9                               | 0                              | 0                          | 0                           | 8.9   | 1.3      | 429   | 1.0                          | 36   | 0.0                                   | 0.0                 | 652                                | 519         | 543                     |                             | 100                 | 100                                       | 3 of 3                            | 22                                   | 72                 | 6                 |               |       | 100                                 | 428   | 339                                     | 355   | -     | 50    |                  | 0     | 9                    | 9                 |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 87   | Bourke                 | 44                       | 44                       | 44                              | 112                           | 129                               | 53                              | 0                              | 0                          | 3                           | 0.0   | 0.8      |       |                              | 197  | 0.0                                   | 2.9                 | 191                                | 191         | 200                     | 1                           | 85                  | 100                                       | 1 of 1                            | 8                                    | 90                 | 3                 | 1             |       | 85                                  |   | 156                                     | 157   | 165   | -     | 0                |       | 0                    | 0                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 86   | Hay                    | 54                       | 54                       | 54                              | 81                            | 81                                | 81                              | 0                              | 0                          | 0                           | 0.0   | 0.2      | 403   | 0.7                          | 151  | 0.0                                   | 0.0                 | 287                                | 287         | 282                     |                             | 98                  | 100                                       | 1 of 1                            | 7                                    | 89                 | 4                 |               |       | 98                                  |   | 222                                     | 224   | 220   | -     | 0                |       | 0                    | 0                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 83   | Oberon                 | 53                       | 39                       | 39                              | 24                            | 26                                | 21                              | 47                             | 13                         | 63                          | 0.0   | 0.4      |       |                              | 68   | 0.0                                   | 0.0                 | 318                                | 315         | 355                     | 9                           | 100                 | 100                                       | 1 of 1                            | 4                                    | 91                 | 3                 | 2             |       |                                     | 100   | 261                                     | 258   | 284   | -     | 0                |       | 100                  | 100               | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 81   | Gwydir                 | 68                       | 56                       | 44                              | 78                            | 93                                | 78                              | 49                             | 51                         | 39                          | 0.0   | 0.2      |       |                              | 59   | 2.4                                   | 2.4                 | 299                                | 275         | 250                     |                             | 100                 | 100                                       | 2 of 2                            | 7                                    | 78                 | 14                |               | 1     |                                     | 100   | 260                                     | 239   | 217   | 10    | 10               | 10    | 20                   | 20                | 3         | 14  | 8   |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 85   | Uralla                 | 86                       | 46                       | 49                              | 17                            | 29                                | 34                              | 6                              | 0                          | 3                           | 0.0   | 0.0      | 123   | 0.6                          | 166  | 0.0                                   | 2.9                 | 147                                | 123         | 131                     | 3                           | 100                 | 42  | 0 of 1                            | 13                                   | 82                 | 3                 | 2             |       |                                     | 100   | 134                                     | 111   | 117   | -     | 0                |       | 0                    | 0                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 95   | Weddin                 | 65                       | 65                       | 65                              | 123                           | 213                               | 203                             | 0                              | 0                          | 10                          | 3.2   | 0.2      |       |                              | 10   | 0.0                                   | 9.7                 | 165                                | 165         | 165                     |                             | 100                 | 100                                       | 1 of 1                            | 12                                   | 79                 | 8                 |               | 1     | 0                                   | 100   | 178                                     | 178   | 176   | -     | 12               | 12    | 8                    | 8                 | 7         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 89   | Bogan                  | 50                       | 50                       | 50                              | 0                             | 0                                 | 0                               | 0                              | 0                          | 0                           | 0.0   | 0.1      |       |                              | 380  | 0.0                                   | 0.0                 | 622                                | 190         | 180                     |                             | 100                 | 0   | 0 of 1                            | 6                                    | 44                 | 51                |               |       | 100                                 | 606   | 196                                     | 188   | -     | -     | 25               | 100   | 44                   | 14                |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 76   | Harden                 | 190                      | 12                       | 5                               | 12                            | 7                                 | 5                               | 0                              | 5                          | 2                           | 2.4   | 0.1      |       |                              | 431  | 4.8                                   | 2.4                 | 510                                | 586         | 586                     |                             | 44                  | 70  | 0 of 1                            |                                      | 14                 |                   |               | 86    | 15                                  | 15  | 15                                      | 541   | 623   | 623   | 90               | 90    | 34                   | 34                | 63        | 3   | 13  |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 88   | Wakool                 |                          |                          |                                 | 0                             | 0                                 | 0                               | 0                              | 0                          | 0                           | 2.1   | 0.0      | 757   | 1.3                          | 47   | 0.0                                   | 0.0                 | 343                                | 343         | 343                     |                             | 100                 | 100                                       | 5 of 5                            |                                      | 91                 | 9                 |               |       | 43                                  | 6   | 51                                      | 340   | 339   | 339   | 100              | 6     | 6                    | 0                 |           | 0   | 0   | 0   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 93   | Tumbarumba             |                          |                          |                                 | 2                             | 0                                 | 9                               | 0                              | 0                          | 0                           | 2.1   | 0.1      | 4,968 | 10.0                         | 87   | 0.0                                   | 0.0                 | 275                                | 199         | 132                     | 11                          | 100                 | 85  | 1 of 2                            |                                      | 67                 | 24                | 8             | 1     |                                     | 100   |   | 279   | 199   | 132   | -                | -     | 0                    |                   | 0         | 0   | 0   |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 94   | Gundagai               | 3                        | 5                        |                                 | 16                            | 14                                | -                               | 3                              | 4                          |                             | -     | -        | 459   | 2.2                          | 16   | 0.0                                   |                     | 117                                | 234         | 234                     |                             | -                   | 100                                       | 1 of 1                            | -                                    | -                  | -                 | -             | -     |                                     |   | 154                                     | 285   | 282   | -     | -                | -     | 234                  |                   | 100       | 100 | 100 |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 92   | Carrathool             |                          |                          |                                 | 39                            | 65                                | 4                               | 4                              | 0                          | 0                           | 0.0   | 0.0      | 113   | 0.4                          | 78   | 0.0                                   | 0.0                 | 108                                | 191         | 101                     |                             | 100                 | 100                                       | 3 of 3                            |                                      | 100                |                   |               |       | 100                                 |   | 129                                     | 230   | 122   | -     | -                | 0     |                      | 1                 | 1         | 0   |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 96   | Warren                 | 12                       | 12                       | 65                              | 388                           | 176                               | 441                             | 0                              | 0                          | 0                           | 5.9   | 0.7      | 624   | 0.8                          | 388  | 0.0                                   | 0.0                 | 203                                | 176         | 176                     |                             | 100                 | 30  | 1 of 2                            | 6                                    | 84                 | 10                |               |       | 100                                 |   | 251                                     | 223   | 215   | -     | 0                |       | 1                    | 1                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 99   | Coolamon               | 5                        | 5                        | 5                               | 7                             | 9                                 | 7                               | 2                              | 2                          | 0                           | 0.0   | 0.3      | 209   | 0.5                          | 114  | 0.0                                   | 0.0                 | 105                                | 105         | 105                     |                             | 100                 | 100                                       | 2 of 2                            | 2                                    | 94                 | 4                 |               |       | 29                                  | 71  | 105                                     | 105   | 103   | -     | 75               |       | 25                   | 71                | 71        |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 102  | Lockhart               |                          |                          |                                 | 7                             | 0                                 | 0                               | 0                              | 0                          | 0                           | 0.0   | 0.1      |       |                              | 24   | 0.0                                   | 0.0                 | 137                                | 114         | 124                     |                             | 96                  | 69  | 1 of 3                            |                                      | 100                |                   |               |       | 37                                  | 59  | 158                                     | 130   | 141   | -     | 2                | 2     | 1                    | 1                 | 2         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 98   | Walcha                 | 67                       | 30                       |                                 | 27                            | 37                                | 23                              | 27                             | 10                         | 30                          | 0.0   | 0.1      |       |                              | 70   | 10.0                                  | 30.0                | 127                                | 153         | 153                     |                             | 100                 | 33  | 0 of 1                            |                                      | -                  |                   |               | 100   |                                     |   | 158                                     | 194   | 191   | -     | -                | 0     |                      | 0                 | 0         | 0   |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 100  | Balranald              | 11                       |                          |                                 | 3                             | 18                                | 21                              | 0                              | 0                          | 0                           | 0.0   | 0.2      |       |                              |  | 0.0                                   | 0.0                 | 179                                | 180         | 184                     |                             | 100                 | 100                                       | 2 of 2                            |                                      | 100                |                   |               |       | 100                                 |   | 210                                     | 212   | 216   | -     | 0                |       | 73                   | 73                | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 97   | Bombala                | 3                        | 3                        | 3                               | 51                            | 40                                | 34                              | 0                              | 0                          | 0                           | 0.0   | 0.0      | 111   | 0.1                          | 49   | 0.0                                   | 0.0                 | 173                                | 173         | 173                     |                             | 100                 | 44  | 1 of 2                            | 1                                    | 2                  | 1                 |               | 96    |                                     | 100   |   | 224   | 225   | 225   | -                | 20    | 20                   | 21                | 21        | 10  |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 101  | Murrumbidgee           |                          |                          |                                 | 96                            | 0                                 | -                               | 0                              | 0                          |                             | -     | -        | 313   | 0.7                          | 113  | 0.0                                   |                     | 153                                | 144         | 144                     |                             | -                   | 0   | 1 of 2                            | -                                    | -                  | -                 | -             | -     |                                     |   | 193                                     | 182   | 182   | -     | -                | 27    |                      | 19                | 19        | 19  |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 90   | Guyra                  | 14                       | 116                      | 102                             | 18                            | 11                                | 21                              | 5                              | 0                          | 2                           | 0.0   | 0.0      | 53    | 0.1                          |  | 0.0                                   | 0.0                 | 203                                | 220         | 214                     |                             | 100                 | 100                                       | 2 of 2                            | 27                                   | 65                 | 7                 |               | 1     |                                     | 100   |   | 171   | 186   | 178   | -                | 0     |                      | 0                 | 0         | 0   |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 104  | Boorowa                | 60                       | 90                       | 67                              | 53                            | 59                                | 97                              | 0                              | 0                          | 0                           | 6.7   | 0.3      | 543   | 1.3                          | 220  | 0.0                                   | 0.0                 | 138                                | 147         | 127                     | 1                           | 99                  | 100                                       | 1 of 1                            | 16                                   | 76                 | 8                 | 1             |       | 99                                  |   | 212                                     | 223   | 192   | -     | 0                |       | 1                    | 1                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 105  | Brewarrina             | 69                       | 31                       | 75                              | 75                            | 88                                | 6                               | 0                              | 0                          | 0                           | 0.0   | 0.4      | 494   | 0.7                          | 225  | 0.0                                   | 0.0                 | 191                                | 198         | 182                     |                             | 80                  | 100                                       | 3 of 3                            | 7                                    | 80                 | 14                |               |       | 80                                  |   | 380                                     | 396   | 379   | -     | 0                |       | 57                   | 57                | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 106  | Jerilderie             | 83                       | 83                       | 83                              | 33                            | 0                                 | 17                              | 0                              | 0                          | 0                           | 0.0   | 0.0      |       |                              | 58   | 0.0                                   | 0.0                 | 72                                 | 81          | 77                      |                             | 100                 | 0   | 0 of 1                            | 13                                   | 87                 |                   |               |       | 100                                 |   | 167                                     | 188   | 179   | -     | 50               | 50    | 6                    | 62                | 65        |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 103  | Central Darling        |                          |                          |                                 | 22                            | 87                                | 26                              | 9                              | 9                          | 4                           | 13.0  | 0.5      |       |                              | 235  | 0.0                                   | 0.0                 | 40                                 | 45          | 80                      |                             | 100                 | 100                                       | 1 of 1                            |                                      | 100                |                   |               |       | 100                                 |   | 172                                     | 118   | 216   | -     | 0                |       | 0                    | 0                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| 107  | Urana                  |                          |                          |                                 | 0                             | 0                                 | 0                               | 0                              | 0                          | 0                           | 0.0   | 0.0      |       |                              | 73   | 0.0                                   | 0.0                 | 90                                 | 90          | 90                      |                             | 100                 | 100                                       | 2 of 2                            |                                      | 100                |                   |               |       | 100                                 |   | 284                                     | 281   | 281   | -     | 0                |       | 0                    | 0                 | 0         |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| Medians (% of LWUs basis)<br>for 200 to 1,500 Properties |                        | 57                       | 46                       | 54                              | 24                            | 26                                | 21                              | 0                              | 0                          | 0                           | 0.0   | 0.1      | 403   | 0.7                          | 87   | 0.0                                   | 0.0                 |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   |   |       |       |                  | 212   | 212                  | 192               | Total Vol |     |     | 787   |  | 1 | 3 | 0 |  |  |  |  |  |           |  |  |  |  |
| Median All LWUs (% of LWUs basis)                        |                        | Breaks & Chokes          |                          |                                 | 32                            | Overflows                         |                                 |                                | 3                          | Renewals 0.5% of CRC        |       |          |       |                              | Median % sge treated that was compliant was 100% |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     | Median % of Effluent Recycled                 |   |   | 9     |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| Median All LWUs (Statewide basis)                        |                        |                          |                          |                                 | 35                            |                                   |                                 |                                | 10                         | Renewals 0.5% of CRC        |       |          |       |                              |  |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   |   | 12    |       |                  |       |                      |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |
| Totals for all LWUs                                      |                        |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       |                     | Total volume of sewage collected = |             |                         |                             |                     |   |                                   |                                      |                    |                   | 179,000 ML    |       |                                     |   |   | No. of LWUs Reporting Biosolids Reuse         |       |       |                  |       | 25 (ie. 25% of LWUs) |                   |           |     |     | Total volume of effluent recycled =             |  |   |   |   |  |  |  |  |  | 39,000 ML |  |  |  |  |
|  |                        |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   | No. of LWUs Reporting Recycling for Urban use |       |       |                  |       | 41 (ie. 41% of LWUs) |                   |           |     |     | Effluent Recycled % of total volume collected = |  |   |   |   |  |  |  |  |  | 22%       |  |  |  |  |
|  |                        |                          |                          |                                 |                               |                                   |                                 |                                |                            |                             |       |          |       |                              |  |                                       |                     |                                    |             |                         |                             |                     |   |                                   |                                      |                    |                   |               |       |                                     |   |   | No. of LWUs Reporting Effluent Recycling      |       |       |                  |       | 69 (ie. 70% of LWUs) |                   |           |     |     |   |  |   |   |   |  |  |  |  |  |           |  |  |  |  |



Table 16: Sewerage - financial and efficiency

| WATER UTILITY                                       |                         | FINANCIAL (SEE ALSO COST RECOVERY TABLE 7)                           |             |                                 |   |             |   |        |             |                                |              |       |                  |       |                 |       |       |             |                 |       |                  |       |                         | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 7) |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
|---|-------------------------|--|-------------|---------------------------------|---|-------------|---|--------|-------------|--------------------------------|--------------|-------|------------------|-------|-----------------|-------|-------|-------------|-----------------|-------|------------------|-------|-------------------------|---|--------------|-------|-------|----------------------|-------|-------|-------|-----------------|-----|-----|-----|-----|--|
|   |                         | Total Revenue - Sewerage<br>(excl. Capital Works Grants)<br>(\$'000) |             | Revenue per<br>property<br>(\$) | Residential Revenue Vs Vol<br>Collected |             | Current Replacement Cost of<br>System Assets<br>(CRC) |        |             | Net Debt to Equity<br>WS & Sge |              |       | Return on Assets |       |                 | ERRR  |       |             | Cross Subsidies |       | Operating Result |       | WDV CRC per<br>Property | Externalities<br>(Annual Fees to<br>EPA)    | Loan Payment |       |       | Operating Cost (OMA) |       |       |       | Management Cost |     |     |     |     |  |
|   |                         |  |             |                                 |   |             |   |        |             |                                |              |       |                  |       |                 |       |       |             |                 |       |                  |       |                         |   |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
|   |                         |  |             |                                 |   |             |   |        |             |                                |              |       |                  |       |                 |       |       |             |                 |       |                  |       |                         |   |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
|   |                         | (42)<br>F2   | (42a)<br>F6 | (43)                            | (44)                                    | (45)<br>F10 | (46)  | (47)   | (48)<br>F22 | (48a)                          | (48b)<br>F18 | (49a) | (49b)            | (50)  | (47a)<br>F10/C8 | (51)  | (51a) | (52)<br>F12 | (54)            |       |                  |       |                         |   |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
| 13/14   | 14/15                   | 14/15  | 14/15       | 14/15                           | 14/15                                   | 14/15       | 12/13   | 13/14  | 14/15       | 12/13                          | 13/14        | 14/15 | 12/13            | 13/14 | 14/15           | 14/15 | 14/15 | 13/14       | 14/15           | 14/15 | 14/15            | 12/13 | 13/14                   | 14/15                                       | 11/12        | 12/13 | 13/14 | 14/15                | 11/12 | 12/13 | 13/14 | 14/15           |     |     |     |     |  |
|   | Sydney Water            | 1,270,000  | 1,320,000   | 721                             |   |             | 31,661  |        |             | 100                            | 96           | 98    |                  |       |                 | 1.4   | 1.4   | 1.4         |                 |       |                  |       | 17,330                  |   |              |       |       | 293                  | 279   | 268   | 278   |                 |     |     |     |     |  |
|   | Hunter Water            | 160,650  | 172,061     | 756                             |   |             | 4,474   |        |             | 75                             | 78           | 81    |                  |       |                 | 2.1   | 1.8   | 1.7         |                 |       |                  |       | 19,622                  |   |              |       |       | 308                  | 374   | 346   | 353   |                 |     |     |     |     |  |
| LWUs with > 10,000 Properties                       |                         |  |             |                                 |   |             |   |        |             |                                |              |       |                  |       |                 |       |       |             |                 |       |                  |       |                         |   |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
| 1   | Gosford                 | 44,300   | 49,700      | 710                             | 81                                      | 82          | 1,537   | 2,031  | 30,800      | 5                              | 6            | 6     | -0.4             | -0.2  | 0.2             | -0.4  | -0.1  | 0.3         |                 |       | -29              | 39    | 22,000                  | 0.8   | 10           | 46    | 88    | 325                  | 432   | 404   | 379   | 102             | 176 | 189 | 176 |     |  |
| 2   | Wyong                   | 31,700   | 35,400      | 572                             | 87                                      | 75          | 712   | 1,058  | 16,700      | 10                             | 10           | 9     | -0.2             | -0.3  | 0.2             | -0.2  | -0.4  | 0.2         |                 |       | -39              | 20    | 11,500                  | 0.9   | 67           | 44    | 46    | 327                  | 345   | 354   | 336   | 44              | 55  | 54  | 49  |     |  |
| 3   | Shoalhaven              | 40,500   | 46,700      | 1,115                           | 83                                      | 83          | 465   | 700    | 14,800      | 1                              | 0            | -1    | 1.4              | 1.6   | 3.4             | 1.9   | 2.2   | 3.9         |                 |       | 174              | 527   | 11,100                  | 1.1   | 148          | 183   | 181   | 451                  | 465   | 478   | 500   | 168             | 172 | 169 | 188 |     |  |
| 5   | MidCoast                | 38,500   | 39,800      | 1,133                           | 87                                      | 78          | 453   | 657    | 17,900      | 25                             | 23           | 22    | 1.3              | 1.3   | 1.3             | 2.8   | 2.8   | 2.6         |                 |       | 58               | 93    | 12,900                  | 1.3   | 366          | 651   | 483   | 482                  | 493   | 491   | 543   | 98              | 104 | 105 | 128 |     |  |
| 6   | Tweed                   | 35,700   | 33,500      | 1,089                           | 83                                      | 70          | 604   | 817    | 24,200      | 3                              | 2            | 0     | 0.5              | 1.5   | 1.0             | 0.6   | 1.7   | 1.1         |                 |       | 262              | 110   | 19,600                  | 1.6   | 211          | 206   | 196   | 427                  | 460   | 505   | 524   | 158             | 155 | 175 | 172 |     |  |
| 7   | Port Macquarie-Hastings | 31,900   | 24,600      | 884                             | 88                                      | 90          | 261   | 404    | 13,800      | -4                             | -5           | -8    | 0.7              | 2.6   | 1.3             | 0.6   | 2.9   | 1.5         |                 |       | 128              | 33    | 9,400                   | 1.5   | 127          | 145   | 138   | 369                  | 463   | 494   | 480   | 93              | 107 | 125 | 126 |     |  |
| 9   | Wagga Wagga             | 16,600   | 19,600      | 721                             | 68                                      | 86          | 255   | 352    | 13,500      | 6                              | 6            | 5     | -0.3             | -0.5  | 0.5             | 0.5   | 0.3   | 1.3         |                 |       | -49              | 41    | 9,400                   | 0.7   | 117          | 115   | 110   | 367                  | 413   | 417   | 418   | 58              | 62  | 70  | 64  |     |  |
| 10  | Coffs Harbour           | 27,500   | 28,600      | 1,206                           | 79                                      | 90          | 458   | 659    | 25,800      | 15                             | 14           | 13    | -0.4             | -0.4  | -0.8            | 0.1   | 0.5   | 0.1         |                 |       | -43              | -182  | 19,300                  | 0.3   | 654          | 652   | 650   | 516                  | 584   | 610   | 619   | 177             | 183 | 202 | 201 |     |  |
| 11  | Albury City             | 20,500   | 20,900      | 872                             | 75                                      | 72          | 183   | 338    | 13,900      | 1                              | -2           | -6    | 2.2              | 3.9   | 4.0             | 2.6   | 4.2   | 4.1         |                 |       | 309              | 283   | 7,600                   | 0.9   | 52           | 45    | 94    | 444                  | 437   | 429   | 393   | 146             | 122 | 160 | 120 |     |  |
| 13  | Tamworth Regional       | 20,500   | 21,500      | 1,092                           | 76                                      | 47          | 233   | 295    | 15,000      | -2                             | -2           | -4    | 0.9              | 1.6   | 2.4             | 1.8   | 2.5   | 3.2         |                 |       | 203              | 265   | 11,900                  | 0.7   | 282          | 297   | 254   | 409                  | 429   | 471   | 425   | 176             | 172 | 175 | 169 |     |  |
| 15  | Eurobodalla             | 18,800   | 19,300      | 1,069                           | 87                                      | 80          | 232   | 399    | 20,800      | 2                              | 1            | -1    | 0.7              | 0.6   | 1.3             | 1.1   | 1.0   | 1.7         |                 |       | 66               | 151   | 12,800                  | 1.1   | 340          | 352   | 251   | 536                  | 523   | 565   | 501   | 165             | 176 | 195 | 187 |     |  |
| 17  | Queanbeyan              | 12,600   | 11,700      | 677                             | 82                                      | 83          | 116   | 241    | 14,400      | -17                            | -19          | -20   | -1.0             | 3.6   | 2.4             | -2.2  | 2.6   | 1.3         |                 |       | 219              | 90    | 6,700                   |   | 0            | 0     | 0     | 417                  | 373   | 372   | 377   | 145             | 153 | 161 | 205 |     |  |
| 19  | Orange                  | 11,700   | 14,000      | 846                             | 76                                      | 72          | 159   | 248    | 15,000      | -13                            | -14          | -12   | 2.2              | 2.7   | 3.7             | 1.2   | 1.7   | 2.7         |                 |       | 269              | 360   | 9,600                   | 0.5   | 0            | 0     | 1     | 327                  | 346   | 374   | 409   | 154             | 184 | 176 | 178 |     |  |
| 18  | Dubbo                   | 14,200   | 17,200      | 1,048                           | 90                                      | 64          | 180   | 244    | 16,500      | 0                              | -4           | -3    | 2.3              | 3.4   | 4.4             | 1.8   | 2.7   | 3.9         |                 |       | 240              | 473   | 10,900                  | 0.5   | 19           | 18    | 91    | 367                  | 359   | 349   | 350   | 165             | 158 | 161 | 156 |     |  |
| 16  | Wingecaribee            | 14,900   | 16,800      | 1,068                           | 85                                      | 74          | 207   | 273    | 16,500      | 0                              | -1           | -4    | 0.8              | 0.6   | 2.4             | 1.4   | 1.1   | 3.0         |                 |       | 97               | 311   | 13,200                  | 2.0   | 225          | 235   | 236   | 412                  | 424   | 531   | 439   | 151             | 156 | 220 | 189 |     |  |
| 14  | Clarence Valley         | 15,900   | 18,000      | 1,224                           | 83                                      | 88          | 282   | 323    | 20,700      | 10                             | 10           | 11    | -0.3             | 0.6   | 0.9             | 1.1   | 2.3   | 2.5         |                 |       | 265              | 219   | 19,100                  | 2.3   | 453          | 488   | 473   | 465                  | 524   | 495   | 462   | 159             | 180 | 171 | 145 |     |  |
| 21  | Bathurst Regional       | 10,800   | 12,300      | 775                             | 65                                      | 54          | 91  | 196    | 13,300      | -11                            | -12          | -12   | 1.1              | 2.2   | 3.0             | 0.7   | 1.8   | 2.7         |                 |       | 129              | 181   | 5,700                   | 0.5   | 0            | 0     | 0     | 406                  | 423   | 416   | 435   | 149             | 199 | 192 | 185 |     |  |
| 24  | Ballina                 | 15,500   | 16,800      | 1,191                           | 81                                      | 90          | 196   | 250    | 16,500      | 8                              | 11           | 17    | -0.2             | -0.2  | 0.5             | 0.6   | 1.4   | 2.7         |                 |       | -42              | -798  | 13,900                  | 1.6   | 341          | 541   | 509   | 601                  | 665   | 649   | 647   | 213             | 308 | 278 | 258 |     |  |
| 22  | Lismore                 | 10,800   | 11,300      | 884                             | 79                                      | 72          | 190   | 319    | 26,200      | -1                             | -1           | -2    | 1.0              | 0.3   | 0.6             | 0.5   | 0.2   | 0.5         | 96              | 3     | 31               | 9     | 14,900                  | 1.3   | 62           | 61    | 68    | 452                  | 458   | 466   | 454   | 119             | 109 | 122 | 130 |     |  |
| 23  | Bega Valley             | 16,500   | 16,600      | 1,363                           | 90                                      | 75          | 182   | 297    | 23,900      | -2                             | -3           | -3    | -0.7             | -0.1  | 0.3             | -0.2  | 0.4   | 0.7         |                 |       | -9               | 40    | 15,000                  | 1.5   | 192          | 191   | 207   | 698                  | 708   | 734   | 740   | 229             | 293 | 328 | 285 |     |  |
| 27  | Byron                   | 15,700   | 16,300      | 1,529                           | 73                                      | 62          | 147   | 204    | 18,300      | 21                             | 17           | 14    | -1.5             | 1.3   | 1.6             | 1.2   | 3.9   | 4.0         |                 |       | 105              | 176   | 13,800                  | 2.6   | 497          | 491   | 489   | 560                  | 629   | 652   | 680   | 160             | 173 | 176 | 149 |     |  |
| 26  | Essential Energy        | 6,300  | 6,400       | 658                             | 79                                      | 60          |   |        |             |                                |              |       |                  |       |                 |       |       | 0.0         |                 |       | 331              | 327   |                         |   | 0            | 0     |       | 429                  | 329   | 319   | 332   | 149             | 56  | 39  | 78  |     |  |
| 20  | Goulburn Mulwaree       | 10,800   | 11,000      | 1,024                           | 70                                      | 68          | 83  | 149    | 14,200      | -2                             | -5           | -6    | 5.6              | 5.6   | 6.2             | 5.8   | 5.6   | 6.2         |                 |       | 476              | 535   | 7,700                   | 0.7   | 187          | 155   | 153   | 394                  | 399   | 368   | 330   | 117             | 113 | 108 | 104 |     |  |
| 25  | Kempsey                 | 8,200  | 9,300       | 951                             | 76                                      | 70          | 158   | 215    | 22,900      | 8                              | 8            | 8     | -1.2             | -1.1  | -0.2            | -0.6  | -0.4  | 0.4         |                 |       | -264             | -120  | 16,100                  | 2.7   | 197          | 208   | 207   | 533                  | 599   | 543   | 563   | 174             | 182 | 181 | 184 |     |  |
| Medians (% of LWUs basis)<br>for >10,000 Properties |                         |  |             |                                 |   |             |   | 16,500 |             | 1                              |              | -1    |                  | 1     |                 | 1     |       | 2           |                 | 1     |                  | 131   |                         | 12,800                                      |              | 168   |       | 181                  |       | 448   |       | 447             |     | 165 |     | 170 |  |
| LWUs with 3,001 - 10,000 Properties                 |                         |  |             |                                 |   |             |   |        |             |                                |              |       |                  |       |                 |       |       |             |                 |       |                  |       |                         |   |              |       |       |                      |       |       |       |                 |     |     |     |     |  |
| 29  | Armidale Dumaresq       | 5,150  | 5,070       | 597                             | 66                                      | 65          | 62  | 89     | 10,300      | -4                             | -6           | -7    | 0.5              | 2.1   | 3.1             | -0.1  | 1.8   | 2.6         |                 |       | 220              | 219   | 7,300                   | 0.9   | 0            | 0     | 0     | 449                  | 434   | 325   | 227   | 78              | 103 | 125 | 66  |     |  |
| 31  | Lithgow                 | 7,040  | 6,710       | 896                             | 90                                      | 90          | 62  | 105    | 13,800      | 10                             | 12           | 10    | 1.8              | 1.8   | 0.6             | 3.5   | 1.7   | 1.8         |                 |       | 219              | 39    | 8,300                   | 1.9   | 198          | 409   | 174   | 464                  | 442   | 503   | 566   | 119             | 83  | 109 | 150 |     |  |
| 30A   | Hawkesbury              | 5,430  | 5,770       | 753                             | 70                                      | 65          | 83  | 166    | 21,100      | -5                             | 3            | 1     | -0.1             | -0.2  | -0.3            | -0.2  | -0.4  | -0.3        |                 |       | -14              | -33   | 10,800                  | 2.0   | 0            | 0     | 52    | 523                  | 555   | 549   | 563   |                 |     | 254 | 270 |     |  |
| 30  | Griffith                | 7,590  | 7,860       | 1,115                           | 78                                      | 86          | 134   | 177    | 21,300      | 5                              | -5           | 2     | 0.6              | 0.3   | 0.4             | 1.6   | 1.3   | 1.4         |                 |       | 75               | 72    | 19,100                  | 1.6   | 357          | 223   | 211   | 470                  | 491   | 572   | 590   | 167             |     |     |     |     |  |

Table 16: Sewerage - financial and efficiency

| WATER UTILITY |  | FINANCIAL (SEE ALSO COST RECOVERY TABLE 7)                           |             |                                 |   |             |   |      |             |                                |              |              |                  |              |              |              |              |              |                 |              |                  |              |                         | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 7) |              |              |              |                      |              |              |              |                 |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |         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|               |  | Total Revenue - Sewerage<br>(excl. Capital Works Grants)<br>(\$'000) |             | Revenue per<br>property<br>(\$) | Residential Revenue Vs Vol<br>Collected |             | Current Replacement Cost of<br>System Assets<br>(CRC) |      |             | Net Debt to Equity<br>WS & Sge |              |              | Return on Assets |              |              | ERRR         |              |              | Cross Subsidies |              | Operating Result |              | WDV CRC per<br>Property | Externalities<br>(Annual Fees to<br>EPA)    | Loan Payment |              |              | Operating Cost (OMA) |              |              |              | Management Cost |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |         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|               |  |  |             |                                 |   |             |   |      |             |                                |              |              |                  |              |              |              |              |              |                 |              |                  |              |                         |   |              |              |              |                      |              |              |              |                 |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |       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|               |  |  |             |                                 |   |             |   |      |             |                                |              |              |                  |              |              |              |              |              |                 |              |                  |              |                         |   |              |              |              |                      |              |              |              |                 |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |       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|               |  | (42)<br>F2   | (42a)<br>F6 | (43)                            | (44)                                    | (45)<br>F10 | (46)  | (47) | (48)<br>F22 | (48a)                          | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18     | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18    | (48b)<br>F18 | (48b)<br>F18     | (48b)<br>F18 | (48b)<br>F18            | (48b)<br>F18                                | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18         | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18    | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 | (48b)<br>F18 |



### Table 16: Sewerage - financial and efficiency

| WATER UTILITY  | FINANCIAL (SEE ALSO COST RECOVERY TABLE 7)                           |                           |                                 |   |             |   |       |             |                                |                        |       |                  |       |                 |       |       |             |                 |       |                           |                         |  |              |       | EFFICIENCY (SEE ALSO COST RECOVERY TABLE 7) |                      |       |       |       |                 |       |       |       |     |  |  |  |
|--|--|---------------------------|---------------------------------|---|-------------|---|-------|-------------|--------------------------------|------------------------|-------|------------------|-------|-----------------|-------|-------|-------------|-----------------|-------|---------------------------|-------------------------|--|--------------|-------|---|----------------------|-------|-------|-------|-----------------|-------|-------|-------|-----|--|--|--|
|  | Total Revenue - Sewerage<br>(excl. Capital Works Grants)<br>(\$'000) |                           | Revenue per<br>property<br>(\$) | Residential Revenue Vs Vol<br>Collected |             | Current Replacement Cost of<br>System Assets<br>(CRC) |       |             | Net Debt to Equity<br>WS & Sge |                        |       | Return on Assets |       |                 | ERRR  |       |             | Cross Subsidies |       | Operating Result          | WDV CRC per<br>Property | Externalities<br>(Annual Fees to<br>EPA) | Loan Payment |       |   | Operating Cost (OMA) |       |       |       | Management Cost |       |       |       |     |  |  |  |
|  |  |                           |                                 |   |             |   |       |             |                                |                        |       |                  |       |                 |       |       |             |                 |       |                           |                         |  |              |       |   |                      |       |       |       |                 |       |       |       |     |  |  |  |
|  | (42)<br>F2   | (42a)<br>F6               | (43)                            | (44)                                    | (45)<br>F10 | (46)  | (47)  | (48)<br>F22 | (48a)                          | (48b)<br>F18           | (49a) | (49b)            | (50)  | (47a)<br>F10/C8 | (51)  | (51a) | (52)<br>F12 | (54)            |       |                           |                         |  |              |       |   |                      |       |       |       |                 |       |       |       |     |  |  |  |
| 13/14  | 14/15  | 14/15                     | 14/15                           | 14/15                                   | 14/15       | 14/15   | 12/13 | 13/14       | 14/15                          | 12/13                  | 13/14 | 14/15            | 12/13 | 13/14           | 14/15 | 14/15 | 14/15       | 13/14           | 14/15 | 14/15                     | 14/15                   | 12/13                                    | 13/14        | 14/15 | 11/12                                       | 12/13                | 13/14 | 14/15 | 11/12 | 12/13           | 13/14 | 14/15 |       |     |  |  |  |
| LWUs with 200 - 1,500 Properties                         |  |                           |                                 |   |             |   |       |             |                                |                        |       |                  |       |                 |       |       |             |                 |       |                           |                         |  |              |       |   |                      |       |       |       |                 |       |       |       |     |  |  |  |
| 84   | Gilgandra  | 870                       | 790                             | 637                                     | 78          | 79  | 8     | 18          | 14,000                         | -12                    | -12   | -12              | -1.5  | 0.8             | -0.2  | -1.6  | 0.6         | -0.5            |       | -149                      | -39                     | 6,500                                    | 2.5          | 50    | 0   | 2                    | 312   | 322   | 330   | 363             | 42    | 65    | 64    | 74  |  |  |  |
| 73   | Upper Lachlan  | 1,300                     | 1,330                           | 869                                     | 81          | 90  | 13    | 23          | 15,000                         | -17                    | -8    | -10              | 1.4   | 2.5             | 1.5   | 1.1   | 1.9         | 1.0             |       | 220                       | 102                     | 8,700                                    | 2.6          | 64    | 28  | 37                   | 422   | 404   | 392   | 476             | 123   | 108   | 124   | 150 |  |  |  |
| 87   | Bourke   | 740                       | 760                             | 628                                     | 89          | 90  | 8     | 15          | 12,600                         | -16                    | -17   | -13              | 3.0   | 2.0             | 1.1   | 1.9   | 1.1         | 0.3             |       | 128                       | 69                      | 6,400                                    | 2.5          | 7     | 7   | 7                    | 389   | 296   | 394   | 455             | 136   | 114   | 173   | 203 |  |  |  |
| 86   | Hay  | 870                       | 920                             | 719                                     | 84          | 90  | 10    | 22          | 16,600                         | -14                    | -16   | -17              | 2.0   | 1.3             | 1.5   | 1.5   | 0.9         | 1.1             |       | 105                       | 122                     | 8,000                                    | 0.5          | 0     | 0   | 0                    | 465   | 403   | 460   | 482             | 254   | 200   | 241   | 203 |  |  |  |
| 83   | Oberon   | 700                       | 860                             | 688                                     | 58          | 90  | 12    | 19          | 15,200                         | -4                     | -4    | -7               | -0.1  | -0.9            | 2.0   | -0.5  | -1.3        | 1.7             |       | -88                       | 278                     | 9,400                                    | 2.4          | 0     | 0   | 0                    | 539   | 587   | 563   | 399             | 184   | 281   | 260   | 123 |  |  |  |
| 81   | Gwydir   | 720                       | 710                             | 617                                     | 69          | 84  | 9     | 12          | 9,900                          | -4                     | -6    | -5               | -15.2 | 7.0             | 3.4   | -16.4 | 5.7         | 2.9             |       | 214                       | 214                     | 7,900                                    | 3.5          | 1     | 6   | 5                    | 283   | 234   | 250   | 323             | 17    | 22    | 21    | 53  |  |  |  |
| 85   | Uralla   | 530                       | 580                             | 518                                     | 90          | 90  | 6     | 8           | 6,900                          | -7                     | -9    | -11              | 1.0   | -0.7            | 0.3   | -0.6  | -1.4        | -0.4            |       | -39                       | 17                      | 5,600                                    | 2.7          | 0     | 0   | 0                    | 395   | 344   | 377   | 364             | 138   | 124   | 132   | 95  |  |  |  |
| 95   | Weddin   | 390                       | 470                             | 500                                     | 90          | 90  | 7     | 13          | 12,700                         | -8                     | -10   | -9               | 1.2   | 1.9             | 2.0   | 1.0   | 1.8         | 1.9             |       | 103                       | 107                     | 6,900                                    | 3.2          | 0     | 0   | 0                    | 178   | 180   | 259   | 334             | 28    | 28    | 28    | 116 |  |  |  |
| 89   | Bogan  | 680                       | 790                             | 823                                     | 57          | 47  | 7     | 11          | 11,600                         | -12                    | -14   | -15              | 3.7   | 3.4             | 4.7   | 2.8   | 2.5         | 3.7             |       | 247                       | 348                     | 7,400                                    | 3.2          | 0     | 0   | 0                    | 254   | 275   | 432   | 456             | 127   | 114   | 208   | 281 |  |  |  |
| 76   | Harden   | 640                       | 650                             | 691                                     | 80          | 14  | 7     | 16          | 15,700                         | -9                     | -12   | -13              | 2.6   | 2.2             | -0.8  | 1.8   | 1.5         | -1.2            |       | 145                       | -62                     | 7,600                                    | 3.2          | 89    | 0   | 0                    | 358   | 265   | 312   | 516             | 136   | 133   | 167   | 189 |  |  |  |
| 88   | Wakool   | 750                       | 800                             | 792                                     | 77          | 90  | 12    | 27          | 25,200                         | -8                     | -8    | -9               | -0.7  | 0.2             | 0.5   | -1.3  | -0.3        | 0.1             |       | -16                       | 29                      | 12,300                                   |              | 47    | 3   | 3                    | 309   | 416   | 361   | 350             | 95    | 84    | 105   | 116 |  |  |  |
| 93   | Tumbarumba   | 650                       | 700                             | 700                                     | 79          | 67  | 14    | 23          | 21,900                         | -5                     | -5    | -3               | 0.9   | 2.0             | 1.1   | 0.0   | 1.1         | 1.0             |       | 205                       | 1594                    | 14,400                                   | 4.0          | 0     | 1   | 167                  | 390   | 399   | 318   | 325             | 85    | 86    | 94    | 98  |  |  |  |
| 94   | Gundagai   | 710                       | 790                             | 952                                     | 61          | 90  | 8     | 15          | 15,500                         | -8                     | -11   | -12              | 2.3   | 3.1             | 3.1   | 2.1   | 2.8         | 2.8             |       | 310                       | 314                     | 10,100                                   | 3.7          | 0     | 0   | 0                    | 475   | 446   | 438   | 510             | 135   | 147   | 118   | 190 |  |  |  |
| 92   | Carrathool   | 280                       | 280                             | 337                                     | 90          | 90  | 6     | 7           | 8,000                          | 3                      | 4     | 2                | -1.6  | 0.6             | 0.6   | -1.6  | 0.6         | 0.9             |       | 46                        | 40                      | 7,100                                    |              | 0     | 0   | 33                   | 211   | 252   | 205   | 184             | 24    | 20    | 16    | 22  |  |  |  |
| 96   | Warren   | 490                       | 490                             | 598                                     | 76          | 89  | 4     | 14          | 15,300                         | -20                    | -20   | -19              | -1.0  | -1.6            | -1.8  | -3.5  | -3.6        | -3.4            |       | -120                      | -112                    | 5,300                                    | 3.7          | 0     | 0   | 0                    | 552   | 543   | 541   | 488             | 192   | 242   | 235   | 189 |  |  |  |
| 99   | Coolamon   | 440                       | 520                             | 510                                     | 90          | 90  | 13    | 18          | 16,700                         | -10                    | -10   | -11              | 0.1   | -0.3            | 0.6   | -0.4  | -0.7        | 0.2             |       | -111                      | 12                      | 12,600                                   | 0.6          | 0     | 0   | 0                    | 248   | 289   | 318   | 271             | 55    | 53    | 52    | 35  |  |  |  |
| 102  | Lockhart   | 400                       | 410                             | 466                                     | 90          | 90  | 7     | 13          | 13,800                         | -24                    | -23   | -26              | 0.0   | 0.4             | 1.5   | -0.9  | -0.2        | 1.0             |       | 25                        | 82                      | 7,600                                    | 2.2          | 0     | 0   | 0                    | 297   | 319   | 295   | 213             | 73    | 97    | 32    | 18  |  |  |  |
| 98   | Walcha   | 370                       | 380                             | 475                                     | 79          | 90  | 4     | 5           | 6,900                          | -7                     | -8    | -7               | 2.1   | 1.8             | 1.4   | 1.2   | 0.9         | 0.6             |       | 97                        | 76                      | 5,400                                    | 3.8          | 6     | 1   | 0                    | 292   | 312   | 427   | 363             | 56    | 72    | 97    | 98  |  |  |  |
| 100  | Balranald  | 270                       | 260                             | 306                                     | 90          | 90  | 7     | 13          | 14,600                         | -2                     | -4    | -7               | -0.1  | -1.0            | -2.2  | -0.9  | -1.8        | -2.3            |       | -84                       | -178                    | 8,100                                    | 0.0          | 0     | 0   | 0                    | 182   | 178   | 268   | 271             | 49    | 52    | 99    | 53  |  |  |  |
| 97   | Bombala  | 430                       | 440                             | 571                                     | 80          | 2   | 13    | 29          | 35,900                         | -13                    | -14   | -15              | -0.9  | -0.8            | -1.0  | -1.4  | -1.3        | -1.5            |       | -149                      | -174                    | 17,400                                   | 4.0          | 54    | 0   | 0                    | 284   | 322   | 334   | 373             | 82    | 98    | 97    | 130 |  |  |  |
| 101  | Murrumbidgee   | 240                       | 230                             | 291                                     | 90          | 90  | 7     | 10          | 13,400                         | -15                    | -15   | -16              | -0.5  | -0.5            | -0.5  | -1.2  | -1.3        | -1.1            |       | -48                       | -43                     | 9,300                                    | 1.2          | 0     | 0   | 0                    | 213   | 212   | 237   | 233             | 73    | 77    | 82    | 72  |  |  |  |
| 90   | Guyra  | 650                       | 660                             | 550                                     | 86          | 89  | 18    | 22          | 17,300                         | -4                     | -6    | -7               | -0.2  | 0.0             | 0.2   | -0.2  | 0.1         | 0.2             |       | 31                        | 32                      | 15,400                                   | 2.5          | 178   | 97  | 99                   | 390   | 362   | 347   | 333             | 123   | 119   | 20    | 85  |  |  |  |
| 104  | Boorowa  | 410                       | 440                             | 667                                     | 90          | 90  | 6     | 13          | 17,900                         | 0                      | -11   | -11              | 0.6   | 0.3             | 0.5   | -0.3  | -0.3        | -0.2            |       | -14                       | 67                      | 8,600                                    | 0.9          | 34    | 35  | 32                   | 380   | 356   | 385   | 420             | 207   | 160   | 130   | 150 |  |  |  |
| 105  | Brewarrina   | 420                       | 440                             | 917                                     | 88          | 86  | 5     | 11          | 20,500                         | -14                    | -11   | -17              | 4.5   | -0.1            | 0.2   | 4.4   | 6.0         | 0.1             |       | -46                       | 477                     | 11,200                                   |              | 6     | 6   | 6                    | 1058  | 472   | 576   | 583             | 147   | 92    | 162   | 183 |  |  |  |
| 106  | Jerilderie   | 250                       | 240                             | 558                                     | 67          | 90  | 3     | 8           | 16,800                         | -28                    | -25   | -27              | 2.6   | 1.3             | 0.7   | 0.0   | -0.9        | -1.1            |       | 42                        | 19                      | 8,100                                    | 2.3          | 0     | 0   | 0                    | 380   | 343   | 419   | 419             | 79    | 83    | 135   | 98  |  |  |  |
| 103  | Central Darling  | 110                       | 110                             | 297                                     | 90          | 90  | 3     | 5           | 12,800                         | 0                      | -3    | -2               | -1.7  | 1.4             | 4.0   | -1.7  | 2.0         | 6.6             |       | 108                       | 297                     | 7,500                                    |              | 0     | 0   | 0                    | 1359  | 1026  | 250   | 200             | 78    | 47    | 29    |     |  |  |  |
| 107  | Urana  | 190                       | 200                             | 625                                     | 90          | 90  | 7     | 9           | 25,100                         | -8                     | -9    | -9               | -0.2  | 0.2             | -0.4  | -0.4  | 0.0         | -0.6            |       | 34                        | -78                     | 22,100                                   |              | 234   | 213   | 216                  | 386   | 376   | 356   | 509             | 114   | 114   | 113   | 159 |  |  |  |
| Medians (% of LWUs basis)<br>for 200 to 1,500 Properties |  | 15,200                    |                                 |   |             |   |       | -11         |                                |                        | 0.6   |                  |       | 0.2             |       |       | -35         |                 | 67    | 8,100                     |                         |  | 0            |       |   | 0                    | 343   |       |       | 364             | 97    |       |       | 116 |  |  |  |
| Median All LWUs (% of LWUs basis)                        |  | Revenue/prop              |                                 | \$710                                   |             | CRC \$/Assessment                                     |       | \$15000     |                                | Net D/E                |       | -8               |       | 1.2             |       | ERRR  |             | 1.2             |       | Loan Payment per property |                         |  | \$20         |       | OMA \$ per property                         |                      |       | \$420 |       | Mngmnt \$/prop  |       |       | \$150 |     |  |  |  |
| Median All LWUs (Statewide basis)                        |  | \$882                     |                                 |   |             | \$16500   |       |             |                                | -1                     |       | 1.3              |       | 1.7             |       |       |             |                 |       | \$110                     |                         |  |              |       |   | \$420                |       |       |       |                 |       | \$160 |       |     |  |  |  |
| Totals for all LWUs                                      |  | Total Sge Revenue \$663 M |                                 |   |             | Total Sge CRC \$13,600M                               |       |             |                                | Total Sge WDC \$9,200M |       |                  |       |                 |       |       |             |                 |       |                           |                         |  |              |       |   |                      |       |       |       |                 |       |       |       |     |  |  |  |

NOTE: 1. If the reported management cost is <\$20/property or not reported, the previous year's management cost has been adopted and is shown in *italics bold*. In such cases, the OMA cost per property has not been increased to include this adopted management cost.

2. If the OMA cost is not reported, the previous year's value has been adopted and is shown in *italics bold*.

3. Where the residential volume is reported to be greater than 90%, a maximum value of 90% has been adopted. This is shown in *italics bold*.



Table 17: Sewerage - environmental and levels of service

| WATER UTILITY                                       |                         | ENVIRONMENTAL                    |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       | LEVELS OF SERVICE           |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
|---|-------------------------|----------------------------------|----------------|--------------|----------------|--------------|--------------|-------|-------|-------|-------|--------------|-----------------|-----------------------------------|-------|-------|-----------------------------|---|------------------|-------|-------|--------------------|-------|-------|---|-------|-----|--------------------|-------------------------------|-----|
|   |                         | EPA DISCHARGE LICENCE COMPLIANCE |                |              |                |              |              |       |       |       |       |              |                 | Sewage Treated that was Compliant |       |       | STWs Compliant at all times | Fully Complied with Environmental Regulator | Odour Complaints |       |       | Service Complaints |       |       | Total Sewerage Complaints<br>(Odour, service, Other, Billing) |       |     | Customer Inquiries | Average Sewerage Interruption |     |
|   |                         |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
|   |                         |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
|   |                         | BOD                              |                |              |                | SS           |              |       |       | N     | P     | Oil & Grease | Faecal Coliform |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
| Compliance  |                         | 90 %-ile Limit                   | Compliance     |              | 90 %-ile Limit |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
| (%)<br>(55)   | (mg/L)<br>(56)          | (%)<br>(57)                      | (mg/L)<br>(58) | (%)<br>(59a) | (%)<br>(59b)   | (%)<br>(59c) | (%)<br>(59d) |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
| 12/13   | 13/14                   | 14/15                            | 14/15          | 12/13        | 13/14          | 14/15        | 14/15        | 14/15 | 14/15 | 14/15 | 14/15 | 14/15        | 12/13           | 13/14                             | 14/15 | 14/15 | 14/15                       | 12/13                                       | 13/14            | 14/15 | 12/13 | 13/14              | 14/15 | 14/15 | 13/14   | 14/15 |     |                    |                               |     |
|   | Sydney Water            |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       | 277 | 281                |                               |     |
|   | Hunter Water            |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       | 148 | 148                |                               |     |
| LWUs with > 10,000 Properties                       |                         |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
| 1   | Gosford                 | 100                              | 100            | 100          | 30             | 100          | 100          | 100   | 50    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 2.2              | 1.9   | 2.1   | 2                  | 2     | 2     | 2   | 2     | 2   | -                  | 209                           | 306 |
| 2   | Wyong                   | 100                              | 100            | 100          | NL             | 100          | 100          | 100   | 50    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 6 of 6                      | Yes   | 0.9              | 1.4   | 1.3   | 10                 | 12    | 12    | 10  | 12    | 12  | -                  | 152                           | 158 |
| 3   | Shoalhaven              | 100                              | 100            | 100          | 40             | 95           | 95           | 94    | 40    | 100   | 100   | 100          | 100             | 94                                | 95    | 94    | 12 of 13                    | No  | 0.2              | 0.2   | 0.1   | 0                  | 1     | 0     | 1   | 1     | 0.6 | -                  | 90                            | 60  |
| 5   | MidCoast                | 100                              | 99             | 100          | 30             | 100          | 99           | 100   | 30    | 98    | 98    | 100          | 99              | 98                                | 96    | 98    | 11 of 13                    | No  | 1.1              | 1.1   | 1.3   | 2                  | 2     | 3     | 2   | 2     | 3   | 12                 | -                             | -   |
| 6   | Tweed                   | 100                              | 100            | 100          | 10             | 97           | 93           | 100   | 15    | 100   | 100   | 100          | 100             | 97                                | 83    | 100   | 5 of 8                      | Yes   | 0.5              | 1.3   | 0.4   | 6                  | 7     | 6     | 6   | 7     | 6   | 0                  | 130                           | 95  |
| 7   | Port Macquarie-Hastings | 100                              | 100            | 100          | 10             | 100          | 100          | 100   | 15    | 100   | 100   | 100          | 100             | 89                                | 82    | 100   | 5 of 5                      | Yes   | 2.3              | 2.5   | 2.4   | 8                  | 10    | 6     | 8   | 10    | 6   | 1                  | 60                            | 60  |
| 9   | Wagga Wagga             | 100                              | 100            | 100          | 10             | 100          | 100          | 100   | 15    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 6 of 6                      | Yes   | 1.0              | 0.8   | 0.8   | 54                 | 53    | 41    | 54  | 53    | 41  | 0                  | 49                            | 51  |
| 10  | Coffs Harbour           | 100                              | 100            | 100          | NL             | 100          | 100          | 100   | NL    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 5 of 5                      | Yes   | 0.0              | 0.0   | 0.3   | 0                  | 0     | 0     | 0   | 0     | 0   | 0                  | 99                            | 95  |
| 11  | Albury City             | 69                               | 80             | 100          | 15             | 71           | 100          | 100   | 20    | 100   | 91    | 94           | 71              | 19                                | 73    | 63    | 2 of 4                      | No  | 0.3              | 0.3   | 0.8   | 1                  | 1     | 2     | 1   | 1     | 2   | 27                 | 84                            | 94  |
| 13  | Tamworth Regional       | 100                              | 100            | 100          | 20             | 87           | 100          | 100   | 20    | 100   | 100   | 100          | 100             | 87                                | 100   | 100   | 3 of 4                      | Yes   | 0.2              | 0.1   | 0.0   | 22                 | 21    | 16    | 22  | 21    | 16  | -                  | -                             | -   |
| 15  | Eurobodalla             | 72                               | 100            | 100          | 20             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 72                                | 100   | 100   | 5 of 5                      | Yes   | 0.7              | 1.2   | 0.1   | 1                  | 2     | 0     | 1   | 2     | 0   | 3                  | 180                           | 221 |
| 17  | Queanbeyan              | 100                              | 100            | 100          | NL             | 100          | 100          | 100   | NL    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.1              | 0.0   | 0.0   | 10                 | 11    | 12    | 10  | 11    | 12  | 0                  | 120                           | 120 |
| 19  | Orange                  | 100                              | 100            | 100          | 30             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 83                                | 100   | 100   | 2 of 2                      | Yes   | 0.7              | 1.0   | 0.7   | 26                 | 30    | 41    | 26  | 30    | 41  | -                  | 41                            | 52  |
| 18  | Dubbo                   | 100                              | 100            | 100          | 30             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 100                               | 85    | 100   | 2 of 2                      | Yes   | 0.4              | 0.7   | 0.1   | 11                 | 11    | 12    | 11  | 11    | 12  | -                  | 109                           | 88  |
| 16  | Wingecarribee           | 100                              | 100            | 100          | 10             | 100          | 100          | 100   | 15    | 100   | 96    | 100          | 100             | 100                               | 100   | 96    | 4 of 6                      | No  | 1.1              | 1.9   | 1.5   | 21                 | 20    | 11    | 21  | 20    | 11  | 0                  | 120                           | 120 |
| 14  | Clarence Valley         | 100                              | 100            | 100          | 15             | 99           | 94           | 100   | 20    | 92    | 97    | 99           | 97              | 85                                | 73    | 92    | 2 of 6                      | No  | 1.5              | 1.6   | 1.2   | 23                 | 19    | 26    | 23  | 20    | 26  | 15                 | 120                           | 120 |
| 21  | Bathurst Regional       | 100                              | 100            | 100          | 20             | 100          | 100          | 100   | 25    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.0              | 0.0   | 0.1   | 18                 | 24    | 29    | 18  | 24    | 29  | 4                  | 120                           | 120 |
| 24  | Ballina                 | 100                              | 80             | 100          | 10             | 88           | 81           | 94    | 15    | 86    | 99    | 100          | 100             | 76                                | 75    | 79    | 1 of 3                      | No  | 1.0              | 1.9   | 2.3   | 1                  | 4     | 3     | 1   | 4     | 3   | 15                 | 120                           | 120 |
| 22  | Lismore                 | 100                              | 100            | 100          | 15             | 100          | 100          | 100   | 20    | 100   | 68    | 100          | 100             | 88                                | 79    | 68    | 1 of 3                      | No  | 2.7              | 0.6   | 0.0   | 3                  | 16    | 2     | 3   | 17    | 2   | 27                 | 69                            | 118 |
| 23  | Bega Valley             | 100                              | 100            | 100          | 10             | 100          | 98           | 98    | 20    | 100   | 100   | 100          | 94              | 69                                | 92    | 92    | 8 of 10                     | No  | 1.2              | 1.3   | 1.1   | 2                  | 2     | 1     | 2   | 2     | 1   | 3                  | 120                           | 90  |
| 27  | Byron                   | 100                              | 100            | 100          | 10             | 100          | 100          | 100   | 15    | 100   | 98    | 100          | 100             | 88                                | 97    | 97    | 2 of 4                      | No  | 2.1              | 3.7   | 1.3   | 2                  | 4     | 1     | 3   | 5     | 2   | 0                  | 60                            | 60  |
| 26  | Essential Energy        | 100                              | 100            | 100          | 50             | 100          | 100          | 100   | 50    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 0.5              | 0.4   | 0.2   | 1                  | 1     | 0     | 1   | 1     | 0   | -                  | -                             | -   |
| 20  | Goulburn Mulwaree       | 100                              | 100            | 100          | 20             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 1.8              | 1.9   | 0.7   | 21                 | 30    | 28    | 21  | 30    | 28  | 0                  | 90                            | 90  |
| 25  | Kempsey                 | 100                              | 100            | 100          | 15             | 79           | 80           | 77    | 20    | 91    | 97    | 100          | 95              | 79                                | 79    | 74    | 5 of 7                      | No  | 1.3              | 1.6   | 1.1   | 2                  | 2     | 1     | 2   | 2     | 1   | 111                | 119                           | 99  |
| Medians (% of LWUs basis)<br>for >10,000 Properties |                         | 100                              | 100            | 100          |                | 100          | 100          | 98    |       | 100   | 100   | 100          | 99              | 97                                | 100   | 100   |                             |   | 1.0              | 0.9   | 0.8   | 6                  | 6     | 5     | 7   | 11    | 7   | 3                  | 119                           | 95  |
| LWUs with 3,001 - 10,000 Properties                 |                         |                                  |                |              |                |              |              |       |       |       |       |              |                 |                                   |       |       |                             |   |                  |       |       |                    |       |       |   |       |     |                    |                               |     |
| 29  | Armidale Dumaresq       | 100                              | 100            | 100          | 20             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.0              | 1.0   | 1.5   | 0                  | 1     | 2     | 0   | 1     | 1.6 | -                  | 95                            | 95  |
| 31  | Lithgow                 | 100                              | 92             | 100          | 10             | 73           | 92           | 86    | 15    | 99    | 86    | 100          | 97              | 72                                | 73    | 81    | 0 of 3                      | No  | 0.4              | 0.1   | 0.7   | 1                  | 0     | 24    | 1   | 0     | 25  | -                  | -                             | 90  |
| 30A   | Hawkesbury              | 94                               | 100            | 100          | 10             | 94           | 93           | 100   | 15    | 100   | 100   | 100          | 89              | 83                                | 87    | 89    | 1 of 2                      | No  | 0.7              | 0.5   | 0.9   | 20                 | 18    | 15    |   | 18    | 15  | -                  | 60                            | 60  |
| 30  | Griffith                | 100                              | 100            | 100          | 10             | 98           | 99           | 98    | 15    | 100   | 100   | 100          | 98              | 98                                | 99    | 98    | 2 of 3                      | No  | 0.6              | 1.4   | 0.7   | 19                 | 20    | 28    | 19  | 20    | 28  | 1                  | 60                            | 60  |
| 33  | Richmond Valley         | 100                              | 100            | 100          | 20             | 100          | 100          | 98    | 30    | 100   | 100   | 100          | 100             | 100                               | 100   | 98    | 3 of 4                      | No  | 0.2              | 0.0   | 0.0   | 0                  | 0     | -     | 0   | 0     | -   | 63                 | -                             | -   |
| 32  | Mid-Western Regional    | 99                               | 93             | 100          | 10             | 94           | 84           | 100   | 10    | 100   | 60    | 100          | 51              | 48                                | 29    | 40    | 1 of 4                      | No  | 1.7              | 1.4   | 1.1   | 48                 | 54    | 44    | 48  | 54    | 44  | 0                  | -                             | -   |
| 34  | Nambucca                | 96                               | 100            | 96           | 10             | 95           | 92           | 87    | 15    | 95    | 75    | 100          | 87              | 57                                | 46    | 67    | 1 of 4                      | No  | 0.9              | 1.9   | 1.6   | 9                  | 9     | 3     | 9   | 9     | 3   | -                  | 60                            | 60  |
| 35  | Singleton               | 100                              | 100            | 100          | 30             | 100          | 100          | 100   | 30    | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.9              | 0.0   | 0.9   | 9                  | 12    | 20    | 9   | 12    | 20  | 12                 | 60                            | 60  |
| 37  | Inverell                | 100                              | 100            | 100          | 20             | 97           | 99           | 99    | 30    | 100   | 100   | 100          | 100             | 97                                | 99    | 99    | 2 of 4                      | No  | 0.0              | 0.0   | 0.0   | 43                 | 11    | 10    | 43  | 11    | 10  | 2                  | 50                            | 40  |
| 41  | Muswellbrook            | 100                              | 98             | 85           | 20             | 51           | 63           | 65    | 30    | 100   | 100   | 100          | 100             | 51                                | 63    | 47    | 0 of 2                      | No  | 0.5              | 1.4   | 0.3   | 1                  | 3     | 4     | 1   | 3     | 4   | 45                 | 116                           | 105 |
| 36  | Parkes                  | 100                              | 100            | 100          | 30             | 82           | 74           | 100   | 50    | 100   | 100   | 100          | 100             | 82                                | 74    | 63    | 3 of 4                      | No  | 0.2              | 0.0   | 0.0   | 20                 | 34    | 34    | 20  | 34    | 34  | 0                  | 60                            | 60  |
| 42  | Corowa                  | 95                               | 100            | 100          | NL             | 100          | 100          | 100   | NL    | 100   | 100   | 100          | 100             | 95                                | 100   | 100   | 3 of 3                      | Yes   | 1.1              | 1.0   | 0.8   | 20                 | 14    | 13    | 20  | 14    | 13  | 0                  | 120                           | 120 |

Table 17: Sewerage - environmental and levels of service

| WATER UTILITY   |                   | ENVIRONMENTAL                    |                |                |                |              |              |                |              |       |       |              |                 |                                   |       |       |                             |   | LEVELS OF SERVICE |       |                  |       |       |                    |       |       |   |       |       |                    |                               |  |
|---|-------------------|----------------------------------|----------------|----------------|----------------|--------------|--------------|----------------|--------------|-------|-------|--------------|-----------------|-----------------------------------|-------|-------|-----------------------------|---|-------------------|-------|------------------|-------|-------|--------------------|-------|-------|---|-------|-------|--------------------|-------------------------------|--|
|   |                   | EPA DISCHARGE LICENCE COMPLIANCE |                |                |                |              |              |                |              |       |       |              |                 | Sewage Treated that was Compliant |       |       | STWs Compliant at all times | Fully Complied with Environmental Regulator |                   |       | Odour Complaints |       |       | Service Complaints |       |       | Total Sewerage Complaints<br>(Odour, service, Other, Billing) |       |       | Customer Inquiries | Average Sewerage Interruption |  |
|   |                   | BOD                              |                |                |                | SS           |              |                |              | N     | P     | Oil & Grease | Faecal Coliform |                                   |       |       |                             |   |                   |       |                  |       |       |                    |       |       |   |       |       |                    |                               |  |
|   |                   | Compliance                       |                | 90 %-ile Limit |                | Compliance   |              | 90 %-ile Limit |              |       |       |              |                 |                                   |       |       |                             |   |                   |       |                  |       |       |                    |       |       |   |       |       |                    |                               |  |
|   |                   | (%)<br>(55)                      | (mg/L)<br>(56) | (%)<br>(57)    | (mg/L)<br>(58) | (%)<br>(59a) | (%)<br>(59b) | (%)<br>(59c)   | (%)<br>(59d) |       |       |              |                 |                                   |       |       |                             |   |                   |       |                  |       |       |                    |       |       |   |       |       |                    |                               |  |
| 12/13   | 13/14             | 14/15                            | 14/15          | 12/13          | 13/14          | 14/15        | 14/15        | 14/15          | 14/15        | 14/15 | 14/15 | 14/15        | 12/13           | 13/14                             | 14/15 | 14/15 | 14/15                       | 12/13                                       | 13/14             | 14/15 | 12/13            | 13/14 | 14/15 | 12/13              | 13/14 | 14/15 | 14/15   | 13/14 | 14/15 |                    |                               |  |
| 38  | Moree Plains      | 100                              | 100            | 100            | 20             | 75           | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 75                                | 100   | 100   | 4 of 4                      | Yes   | 0.5               | 0.0   | 0.0              | 24    | 23    | 23                 | 24    | 24    | 23  | -     | 180   | 180                |                               |  |
| 44  | Gunnedah          | 100                              | 100            | 100            | 20             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 1.0               | 0.5   | 1.0              | 9     | 13    | 11                 | 9     | 13    | 11  | 2     | 88    | 80                 |                               |  |
| 46  | Narrabri          | 100                              | 100            | 71             | 20             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 91                                | 100   | 71    | 2 of 3                      | No  | 0.5               | 2.0   | 0.8              | 53    | 46    | 17                 | 53    | 46    | 17  | 4     | 45    | 45                 |                               |  |
| 43  | Tumut             | 100                              | 100            | 100            | 10             | 100          | 100          | 100            | 15           | 97    | 100   | 100          | 100             | 100                               | 100   | 97    | 3 of 5                      | No  | 0.2               | 0.0   | 0.0              | 24    | 23    | 21                 | 31    | 23    | 22  | 0     | 90    | 90                 |                               |  |
| 49  | Young             | 100                              | 98             | 100            | 10             | 33           | 94           | 100            | 15           | 100   | 100   | 100          | 83              | 33                                | 94    | 83    | 0 of 1                      | No  | 0.5               | 1.6   | 3.1              | 32    | 7     | 7                  | 32    | 7     | 7   | 1     | 100   | 100                |                               |  |
| 39  | Cowra             | 100                              | 100            | 100            | 10             | 75           | 100          | 100            | 15           | 100   | 50    | 100          | 100             | 42                                | 67    | 50    | 0 of 1                      | No  | 1.5               | 0.0   | 0.0              | 38    | 41    | 44                 | 40    | 42    | 44  | 0     | 240   | 240                |                               |  |
| 45  | Upper Hunter      | 95                               | 100            | 100            | 20             | 54           | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 54                                | 100   | 100   | 4 of 4                      | Yes   | 0.0               | 0.2   | 0.7              | 15    | 14    | 12                 | 15    | 14    | 12  | -     | 120   | 120                |                               |  |
| 52  | Snowy River       | 100                              | 100            | 100            | 10             | 88           | 100          | 99             | 15           | 100   | 85    | 100          | 89              | 88                                | 79    | 81    | 1 of 4                      | No  | 0.0               | 0.0   | 0.0              | 8     | 8     | 7                  | 13    | 8     | 7   | 0     | 120   | 120                |                               |  |
| 51  | Forbes            | 100                              | 100            | 100            | 10             | 100          | 100          | 100            | 15           | 100   | 100   | 100          | 100             | 75                                | 75    | 100   | 1 of 1                      | Yes   | 0.3               | 0.6   | 1.3              | 3     | 7     | 29                 | 3     | 8     | 29  | 4     | 60    | 90                 |                               |  |
| 50  | Cooma-Monaro      | 100                              | 100            | 100            | 10             | 100          | 100          | 100            | 15           | 100   | 100   | 100          | 100             | 86                                | 100   | 100   | 2 of 2                      | Yes   | 0.0               | 1.5   | 0.3              | 60    | 69    | 41                 | 60    | 69    | 41  | 0     | 90    | 90                 |                               |  |
| 53  | Berrigan          | 100                              | 100            | 100            | NL             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 4 of 4                      | Yes   | 3.0               | 3.4   | 5.0              | 49    | 47    | 51                 | 54    | 48    | 54  | 4     | 90    | 90                 |                               |  |
| 48  | Leeton            | 100                              | 100            | 100            | 70             | 100          | 100          | 100            | 70           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 3 of 3                      | Yes   | 0.0               | 0.0   | 0.0              | 0     | 0     | 2                  | 0     | 0     | 2   | 0     | 120   | 120                |                               |  |
| 54  | Deniliquin        | 100                              | 100            | 100            | 20             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0              | 11    | 13    | 12                 | 11    | 13    | 12  | 11    | -     | 120                |                               |  |
| Medians (% of LWUs basis)<br>for 3,000 to 10,000 Properties |                   | 100                              | 100            | 100            |                | 99           | 100          | 100            |              | 100   | 100   | 100          | 100             | 90                                | 100   | 99    |                             |   | 0.5               | 0.4   | 0.7              | 17    | 13    | 17                 | 17    | 13    | 17  | 1     | 90    | 90                 |                               |  |
| LWUs with 1,501 - 3,000 Properties                          |                   |                                  |                |                |                |              |              |                |              |       |       |              |                 |                                   |       |       |                             |   |                   |       |                  |       |       |                    |       |       |   |       |       |                    |                               |  |
| 47  | Bellingen         | 100                              | 100            | 100            | 10             | 93           | 100          | 100            | 15           | 100   | 100   | 100          | 100             | 88                                | 100   | 100   | 3 of 3                      | Yes   | 1.0               | 0.7   | 0.7              | 9     | 7     | 11                 | 11    | 8     | 11  | 8     | 60    | 60                 |                               |  |
| 60  | Glen Innes Severn | 100                              | 100            | 100            | 10             | 100          | 100          | 100            | 15           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0              | 86    | 37    | 18                 | 86    | 37    | 18  | 0     | 40    | 40                 |                               |  |
| 58  | Cootamundra       | 100                              | 100            | 100            | 30             | 100          | 100          | 100            | 40           | 100   | 100   | 100          | 100             | 75                                | 100   | 100   | 1 of 1                      | Yes   | 0.4               | 0.0   | 0.4              | 71    | 66    | 73                 | 71    | 68    | 75  | 5     | 100   | 90                 |                               |  |
| 57  | Wellington        | 100                              | 100            | 100            | 15             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0              | 11    | 11    | 13                 | 11    | 11    | 13  | -     | 90    | 90                 |                               |  |
| 91  | Cabonne           | 100                              | 100            |                |                | 90           | 91           |                |              |       |       |              |                 | 69                                | 82    | 0     | 5 of 6                      | No  | 0.0               | 0.0   | 0.0              | 19    | 13    | 13                 | 20    | 13    | 13  | 6     | 240   | 240                |                               |  |
| 80  | Greater Hume      | 100                              | 100            | 100            | 20             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 6 of 6                      | Yes   | 0.0               | 0.0   | 0.0              | 0     | 4     | 5                  | 0     | 4     | 5   | 20    | 100   | 90                 |                               |  |
| 59  | Lachlan           | 100                              | 100            |                |                | 59           | 80           |                |              |       |       |              |                 | 59                                | 80    | 0     | 2 of 2                      | No  | 0.0               | 0.9   | 0.0              | 5     | 8     | -                  | 5     | 8     | -   | -     | 75    | -                  |                               |  |
| 65  | Murray            | 100                              | 100            | 100            | NL             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0              | 2     | 4     | 4                  | 2     | 4     | 4   | -     | 50    | 50                 |                               |  |
| 62  | Narromine         | 100                              | 100            | 100            | NL             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0              | 1     | 9     | 6                  | 1     | 9     | 6   | 0     | 60    | 60                 |                               |  |
| 56  | Yass Valley       | 100                              | 100            | 100            | 10             | 100          | 100          | 100            | 15           | 100   | 100   | 100          | 100             | 100                               | 67    | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0              | 24    | 20    | 23                 | 24    | 20    | 23  | 6     | 180   | 180                |                               |  |
| 61  | Liverpool Plains  | 91                               | 100            | 100            | 20             | 66           | 87           | 65             | 30           | 100   | 100   | 91           | 100             | 66                                | 87    | 56    | 0 of 2                      | No  | 0.5               | 0.0   | 0.0              | 31    | 26    | 25                 | 34    | 29    | 27  | 1     | 35    | 40                 |                               |  |
| 55  | Warrumbungle      | 96                               | 100            | 100            | 45             | 80           | 85           | 95             | 65           | 95    | 95    | 89           | 100             | 73                                | 78    | 83    | 3 of 4                      | No  | 1.2               | 2.4   | 2.4              | 22    | 2     | 44                 | 33    | 4     | 61  | 49    | 80    | 118                |                               |  |
| 69  | Temora            | 83                               | 100            | 100            | 30             | 49           | 100          | 100            | 40           | 100   | 100   | 100          | 58              | 49                                | 58    | 58    | 0 of 1                      | No  | 0.0               | 0.0   | 0.0              | 19    | 49    | 12                 | 19    | 49    | 12  | 0     | 90    | 90                 |                               |  |
| 71  | Palerang          | 100                              | 100            | 100            | 10             | 82           | 83           | 100            | 15           | 100   | 95    | 100          | 100             | 47                                | 76    | 95    | 2 of 3                      | No  | 3.3               | 4.8   | 0.9              | 18    | 16    | 20                 | 22    | 16    | 20  | 2     | 60    | 60                 |                               |  |
| 72  | Bland             | 100                              | 100            | 100            | 20             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 2 of 3                      | Yes   | 0.0               | 0.0   | 0.0              | 66    | 28    | 13                 | 66    | 28    | 13  | 5     | 60    | 55                 |                               |  |
| 63  | Narrandera        | 89                               | 100            | -              | 20             | 100          | 100          | -              | 30           | 100   | -     | -            | -               | 50                                | 11    | -     | 0 of 1                      | No  | 0.0               | 0.0   | 0.0              | 88    | 71    | 73                 | 88    | 71    | 73  | -     | 120   | 120                |                               |  |
| 67  | Cobar             | 100                              | 100            | 100            | NL             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0              | 27    | 27    | 18                 | 27    | 27    | 18  | -     | 120   | 120                |                               |  |
| 74  | Wentworth         | 100                              | 100            | 100            | NL             | 100          | 100          | 100            | NL           | 100   | 100   | 100          | 100             | 100                               | 100   | 100   | 5 of 5                      | Yes   | 1.1               | 4.4   | 3.7              | 13    | 17    | 26                 | 13    | 17    | 26  | -     | 60    | 60                 |                               |  |
| 75  | Coonamble         |                                  | 100            | 100            | 20             |              | 57           | 53             | 50           | 100   | 100   | 100          | 98              |                                   | 25    | 46    | 0 of 2                      | No  | 0.0               | 0.0   | 0.0              | 0     | 16    | 8                  | 0     | 16    | 8   | 0     | 60    | 60                 |                               |  |
| 70  | Kyogle            | 100                              | 100            | 100            | NL             | 96           | 96           | 100            | NL           | 100   | 100   | 100          | 100             | 60                                | 96    | 100   | 2 of 3                      | Yes   | 1.2               | 1.8   | 1.2              | 9     | 11    | 13                 | 9     | 11    | 13  | 0     | 90    | 90                 |                               |  |
| 77  | Junee             | 100                              | 100            | 100            | 30             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 100                               | 100   | 50    | 0 of 1                      | No  | 0.0               | 0.0   | 0.0              | 0     | 0     | 0                  | 0     | 0     | 0   | 0     | 30    | 30                 |                               |  |
| 78  | Blayney           | 100                              | 100            | 100            | 30             | 100          | 100          | 100            | 30           | 100   | 100   | 100          | 100             | 83                                | 100   | 100   | 1 of 1                      | Yes   | 0.0               | 0.5   | 0.5              | 12    | 11    | 12                 | 12    | 11    | 12  | 0     | 60    | 60                 |                               |  |
| 79  | Walgett           | 100                              | 33             | 67             | 20             | 100          | 100          | 67             | 50           | 67    | 100   | 67           | 100             |                                   | 33    | 67    | 2 of 3                      | No  | 0.0               | 0.0   | 0.0              | 6     | 4     | 2                  | 6     | 4     | 2   | 0     | -     | 180                |                               |  |
| 68  | Tenterfield       | 100                              | 99             | 100            | 40             | 100          | 99           | 97             | 45           | 100   | 100   | 100          | 100             | 100                               | 83    | 73    | 0 of 2                      | No  | 0.0               | 0.0   | 0.0              | 35    | 53    | 40                 | 35    | 53    | 40  | 0     | 120   | 120                |                               |  |
| Medians (% of LWUs basis)<br>for 1,500 to 3,000 Properties  |                   | 100                              | 100            | 67             |                | 100          | 100          | 59             |              | 100   | 100   | 100          | 100             | 98                                | 100   | 100   |                             |   | 0.0               | 0.0   | 0.0              | 14    | 13    | 13                 | 14    | 13    | 8   | 1     | 78    | 90                 |                               |  |



Table 17: Sewerage - environmental and levels of service

| WATER UTILITY  |                 | ENVIRONMENTAL  |                |              |              |   |              |              |              |   |       |              |                 |                                   |             |       |                             |   | LEVELS OF SERVICE |       |       |                    |       |       |   |       |       |                    |                               |     |  |
|--|-----------------|--|----------------|--------------|--------------|---|--------------|--------------|--------------|---|-------|--------------|-----------------|-----------------------------------|-------------|-------|-----------------------------|---|-------------------|-------|-------|--------------------|-------|-------|---|-------|-------|--------------------|-------------------------------|-----|--|
|  |                 | EPA DISCHARGE LICENCE COMPLIANCE   |                |              |              |   |              |              |              |   |       |              |                 | Sewage Treated that was Compliant |             |       | STWs Compliant at all times | Fully Complied with Environmental Regulator | Odour Complaints  |       |       | Service Complaints |       |       | Total Sewerage Complaints<br>(Odour, service, Other, Billing) |       |       | Customer Inquiries | Average Sewerage Interruption |     |  |
|  |                 |  |                |              |              |   |              |              |              |   |       |              |                 |                                   |             |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |
|  |                 |  |                |              |              |   |              |              |              |   |       |              |                 |                                   |             |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |
|  |                 | BOD  |                |              |              | SS  |              |              |              | N   | P     | Oil & Grease | Faecal Coliform | Compliance                        |             |       |                             |   | 90 %-ile Limit    |       |       |                    |       |       |   |       |       |                    |                               |     |  |
| Compliance   |                 | 90 %-ile Limit   |                | Compliance   |              | 90 %-ile Limit  |              |              |              |   |       |              |                 |                                   |             |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |
| (%)<br>(55)  | (mg/L)<br>(56)  | (%)<br>(57)  | (mg/L)<br>(58) | (%)<br>(59a) | (%)<br>(59b) | (%)<br>(59c)  | (%)<br>(59d) | (%)<br>(59e) | (%)<br>(59f) | (60)  | (61)  | (62)<br>C11  | (62a)<br>[C13]  | (63)                              | (65)<br>C16 |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |
| 12/13  | 13/14           | 14/15  | 14/15          | 12/13        | 13/14        | 14/15   | 14/15        | 12/13        | 13/14        | 14/15   | 14/15 | 12/13        | 13/14           | 14/15                             | 14/15       | 14/15 | 12/13                       | 13/14                                       | 14/15             | 12/13 | 13/14 | 14/15              | 12/13 | 13/14 | 14/15   | 14/15 | 13/14 | 14/15              |                               |     |  |
| LWUs with 200 - 1,500 Properties                         |                 |  |                |              |              |   |              |              |              |   |       |              |                 |                                   |             |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |
| 84   | Gilgandra       | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 1.5               | 0.0   | 0.0   | 42                 | 29    | 23    | 45  | 31    | 27    | -                  | 90                            | 90  |  |
| 73   | Upper Lachlan   | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 3 of 3                      | Yes   | 0.0               | 0.0   | 0.0   | 5                  | 5     | 5     | 5   | 5     | 5     | -                  | 40                            | 40  |  |
| 87   | Bourke          | 40   | 70             | 100          | 15           | 33  | 60           | 100          | 20           | 100   | 100   | 100          | 100             | 33                                | 60          | 100   | 1 of 1                      | Yes   | 5.7               | 0.0   | 0.0   | 84                 | 84    | 59    | 86  | 84    | 59    | 0                  | 60                            | 60  |  |
| 86   | Hay             | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0   | 39                 | 39    | 39    | 39  | 39    | 39    | 0                  | 300                           | 300 |  |
| 83   | Oberon          | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 25           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0   | 6                  | 5     | 4     | 7   | 7     | 6     | -                  | 120                           | 120 |  |
| 81   | Gwydir          | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0   | 0                  | 0     | 0     | 0   | 0     | 0     | -                  | -                             | -   |  |
| 85   | Uralla          | 100  | 100            | 100          | 15           | 100   | 100          | 100          | 20           | 100   | 100   | 100          | 100             | 42                                | 54          | 42    | 0 of 1                      | No  | 0.0               | 0.0   | 0.0   | 1                  | 3     | 4     | 1   | 3     | 4     | 0                  | 120                           | 75  |  |
| 95   | Weddin          | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0   | 41                 | 71    | 69    | 41  | 71    | 70    | 16                 | 120                           | 120 |  |
| 89   | Bogan           | 100  | 100            | 100          | 30           | 100   | 100          | 0            | 30           | 100   | 100   | 100          | 75              | 100                               | 100         | 0     | 0 of 1                      | No  | 0.0               | 0.0   | 0.0   | 27                 | 20    | 15    | 27  | 20    | 15    | -                  | 80                            | 120 |  |
| 76   | Harden          | 100  | 100            | 100          | 20           | 100   | 75           | 70           | 30           | 100   | 100   | 100          | 100             | 100                               | 50          | 70    | 0 of 1                      | No  | 0.0               | 0.0   | 0.0   | 5                  | 13    | 19    | 5   | 14    | 19    | 0                  | 30                            | 30  |  |
| 88   | Wakool          | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 5 of 5                      | Yes   | 0.0               | 0.0   | 0.0   | 4                  | 50    | 50    | 4   | 50    | 50    | -                  | 60                            | -   |  |
| 93   | Tumbarumba      | 100  | 100            | 85           | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 85    | 1 of 2                      | No  | 1.0               | 3.0   | 0.0   | 4                  | 7     | 5     | 6   | 7     | 5     | 2                  | 120                           | 60  |  |
| 94   | Gundagai        | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 0.0   | 16                 | 18    | -     | 16  | 20    | -     | -                  | 60                            | -   |  |
| 92   | Carrathool      | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 3 of 3                      | Yes   | 4.8               | 8.4   | 0.0   | 72                 | 54    | 30    | 72  | 54    | 30    | 2                  | 120                           | 120 |  |
| 96   | Warren          | 100  | 76             | 77           | 45           | 100   | 52           | 30           | 65           | 100   | 100   | 100          | 100             | 100                               | 52          | 30    | 1 of 2                      | No  | 0.0               | 0.0   | 0.0   | 106                | 53    | 43    | 106   | 53    | 43    | 1                  | 120                           | 120 |  |
| 99   | Coolamon        | 100  | 100            | 100          | 30           | 100   | 100          | 100          | 20           | 100   | 100   | 100          | 100             | 64                                | 100         | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0   | 4                  | 5     | 3     | 4   | 5     | 3     | -                  | 180                           | 180 |  |
| 102  | Lockhart        | 100  | 100            | 100          | 20           | 91  | 75           | 69           | 30           | 100   | 100   | 100          | 100             | 91                                | 75          | 69    | 1 of 3                      | No  | 0.0               | 0.0   | 0.0   | 27                 | 50    | 19    | 27  | 50    | 19    | -                  | 90                            | 90  |  |
| 98   | Walcha          | 82   | 100            | 100          | 20           | 100   | 67           | 33           | 30           | 100   | 100   | 100          | 100             | 82                                | 67          | 33    | 0 of 1                      | No  | 0.0               | 0.0   | 0.0   | 10                 | 15    | 15    | 10  | 15    | 15    | -                  | 90                            | 90  |  |
| 100  | Balranald       | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0   | 4                  | 0     | 9     | 4   | 0     | 9     | -                  | 60                            | 60  |  |
| 97   | Bombala         | 79   | 79             | 79           | 20           | 44  | 44           | 44           | 30           | 100   | 100   | 100          | 100             | 44                                | 44          | 44    | 1 of 2                      | No  | 0.0               | 0.0   | 3.9   | 13                 | 18    | 19    | 13  | 18    | 19    | 0                  | 120                           | 120 |  |
| 101  | Murrumbidgee    | 86   | 87             |              |              | 73  | 73           |              |              |   |       |              |                 | 50                                | 25          | 0     | 1 of 2                      | No  | 0.0               | 0.0   | 0.0   | 57                 | 53    | -     | 57  | 53    | -     | -                  | 120                           | -   |  |
| 90   | Guyra           | 100  | 100            | 100          | 15           | 100   | 100          | 100          | 20           | 100   | 100   | 100          | 100             | 100                               | 85          | 100   | 2 of 2                      | Yes   | 0.0               | 0.8   | 0.8   | 8                  | 3     | 3     | 8   | 3     | 3     | 0                  | 150                           | 120 |  |
| 104  | Boorowa         | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 1.5               | 1.5   | 0.0   | 28                 | 29    | 9     | 28  | 29    | 9     | 0                  | 90                            | 90  |  |
| 105  | Brewarrina      | 100  | 100            | 100          | 20           | 100   | 100          | 100          | 30           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 3 of 3                      | Yes   | 0.0               | 0.0   | 0.0   | 24                 | 28    | 35    | 24  | 28    | 35    | 0                  | 30                            | 60  |  |
| 106  | Jerilderie      | 0  | 0              | 50           | 20           | 0   | 0            | 0            | 30           | 100   | 100   | 50           | 100             | 0                                 | 0           | 0     | 0 of 1                      | No  | 0.0               | 0.0   | 0.0   | 0                  | 0     | 0     | 0   | 0     | 0     | 0                  | 300                           | 300 |  |
| 103  | Central Darling | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 1 of 1                      | Yes   | 0.0               | 0.0   | 8.1   | 223                | 232   | 73    | 309   | 284   | 73    | -                  | 120                           | 120 |  |
| 107  | Urana           | 100  | 100            | 100          | NL           | 100   | 100          | 100          | NL           | 100   | 100   | 100          | 100             | 100                               | 100         | 100   | 2 of 2                      | Yes   | 0.0               | 0.0   | 0.0   | 0                  | 0     | 0     | 0   | 0     | 0     | 0                  | 60                            | 60  |  |
| Medians (% of LWUs basis)<br>for 200 to 1,500 Properties |                 | 100  | 100            | 100          |              | 100   | 100          | 100          |              | 100   | 100   | 100          | 100             | 100                               | 100         | 100   |                             |   | 0.0               | 0.0   | 0.0   | 13                 | 18    | 15    | 13  | 20    | 15    | 0                  | 105                           | 90  |  |
| Median All LWUs (% of LWUs basis)                        |                 | BOD  |                | 100          | %            | SS  |              | 100          | %            |   |       |              |                 |                                   |             |       |                             |   |                   | Odour | 0.0   | Service            |       | 12.4  | Duration  |       |       | 90                 |                               |     |  |
| Median All LWUs (Statewide basis)                        |                 | 100  |                | %            |              | 100   |              | %            |              |   |       |              |                 |                                   |             |       |                             |   |                   | 0.8   | 6     |                    | 95    |       |   |       |       |                    |                               |     |  |
| Totals for all LWUs                                      |                 | 88 LWUs complied with BOD licence<br>(89% of LWUs complied)<br>96% of sampling days complied<br>(4184 sampling days) |                |              |              | 81 LWUs complied with SS licence<br>(82% of LWUs complied)<br>92% of sampling days complied with SS licence<br>(4184 sampling days) |              |              |              | 55 LWUs fully complied with regulator<br>299 STWs were reported to be in use by LWUs<br>220 of these STWs were compliant at all times<br>18 LWUs had no discharge licence and 4 LWUs did not report BOD or SS |       |              |                 |                                   |             |       |                             |   |                   |       |       |                    |       |       |   |       |       |                    |                               |     |  |

Notes:

- 1. Where there is no limit (NL) for BOD or SS licences, compliance is deemed to be 100%.
- 2. Where a LWU has 100 percentile licence limits rather than 90 percentile licence limits, the 100 percentile limits are shown.
- 3. A LWU is deemed to comply with its BOD or SS licence if it achieves >=90% compliance with the 90 percentile limit.



### Table 18 - Sewerage - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY                       | OPERATION & MAINTENANCE (O&M) COST*         |  |  |                                     |  |  |                                    |   |   |                                    | MANAGEMENT COST (A)*               |  |                       |         | OMA*  | O&M COST COMPONENTS for TYPES of ASSET |   |                                |  |  |  |   |                                |  |  |  |                                |   |   |                                       |    |
|-------------------------------------|---|--|--|-------------------------------------|--|--|------------------------------------|---|---|------------------------------------|------------------------------------|--|-----------------------|---------|---|--|---|--------------------------------|--|--|--|---|--------------------------------|--|--|--|--------------------------------|---|---|---------------------------------------|----|
|                                     | Total<br>O&M Cost<br><br>(\$/prop)<br>(66a) | Components (1) - Process                 |  |                                     |  |  | Components (2) - Type of Asset     |   |   |                                    | Components                         |  |                       |         | Total OMA<br>Cost<br><br>(\$/prop)<br>(76b) | Components                             |   | Pumping                        |  |  |  |   | Sewer Main                     |  |  |  | Treatment                      |   |   |                                       |    |
|                                     |   | Maintenance<br><br>(\$/property)<br>(66) | Operation<br><br>(\$/property)<br>(67) | Energy<br><br>(\$/property)<br>(68) | Chemicals<br><br>(\$/property)<br>(69) | Effluent & Biosolids<br><br>(\$/prop)<br>(69a) | Mains<br><br>(\$/property)<br>(70) | Pumping Stations<br><br>(\$/property)<br>(71) | Sewage Treatment<br><br>(\$/property)<br>(72) | Other<br><br>(\$/property)<br>(73) | Admin<br><br>(\$/property)<br>(74) | Engineering & Supervision<br><br>(\$/property)<br>(75) | Total Management Cost |         |   | Treatment<br><br>(\$/property)<br>(77) | Reticulation<br><br>(\$/property)<br>(78) | O&M Cost<br><br>(c/kL)<br>(79) | O&M Cost<br><br>(\$'000/pumping station)<br>(80) | Operation Cost<br><br>(\$'000/pumping station)<br>(81) | Maintenance Cost<br><br>(\$'000/pumping station)<br>(82) | Energy Cost<br><br>(\$'000/pumping station)<br>(83) | O&M Cost<br><br>(c/kL)<br>(85) | O&M Cost<br><br>(\$'000/100km)<br>(86) | Operation Cost<br><br>(\$'000/100km)<br>(87) | Maintenance Cost<br><br>(\$'000/100km)<br>(88) | O&M Cost<br><br>(c/kL)<br>(89) | Operation Cost<br><br>(\$/property)<br>(90) | Maintenance Cost<br><br>(\$/property)<br>(91) | Chemical<br><br>(\$/property)<br>(92) |    |
|                                     |   |  |  |                                     |  |  |                                    |   |   |                                    |                                    |  |                       |         |   |  |   |                                |  |  |  |   |                                |  |  |  |                                |   |   |                                       |    |
|                                     |   |  |  |                                     |  |  |                                    |   |   |                                    |                                    |  |                       |         |   |  |   |                                |  |  |  |   |                                |  |  |  |                                |   |   |                                       |    |
| 2014/15                             |   |  |  |                                     |  | 2014/15  |                                    |   |   | 2014/15                            |                                    |  |                       | 2014/15 | 2014/15                                     |  | 2014/15                                   |                                |  |  |  | 2014/15   | 2014/15                        |  |  |  | 2014/15                        | 2014/15                                     |   |                                       |    |
| LWUs with > 10,000 Properties       |   |  |  |                                     |  |  |                                    |   |   |                                    |                                    |  |                       |         |   |  |   |                                |  |  |  |   |                                |  |  |  |                                |   |   |                                       |    |
| 1                                   | Gosford                                     | 203                                      | 88                                     | 80                                  | 32                                     | 3  | 0                                  | 36  | 74  | 78                                 | 16                                 | 167  | 9                     | 176     | 63  | 379                                    | 78  | 109                            | 26   | 28   | 5  | 16  | 7                              | 13                                     | 188  | 40   | 148                            | 28  | 44  | 18                                    | 3  |
| 2                                   | Wyong                                       | 287                                      | 89                                     | 159                                 | 37                                     | 2  |                                    | 54  | 96  | 132                                | 4                                  | 49   |                       | 49      | 19  | 336                                    | 132                                       | 150                            | 37   | 42   | 19   | 16  | 7                              | 21                                     | 277  | 138  | 139                            | 51  | 85  | 25                                    | 2  |
| 3                                   | Shoalhaven                                  | 312                                      | 58                                     | 200                                 | 32                                     | 7  | 17                                 | 51  | 89  | 134                                | 39                                 | 144  | 44                    | 188     | 84  | 500                                    | 134                                       | 140                            | 40   | 17   | 9  | 5   | 3                              | 23                                     | 176  | 150  | 26                             | 60  | 70  | 24                                    | 7  |
| 5                                   | MidCoast                                    | 415                                      | 121                                    | 194                                 | 55                                     | 5  | 40                                 | 33  | 78  | 160                                | 145                                | 81   | 47                    | 128     | 65  | 543                                    | 160                                       | 110                            | 40   | 13   | 2  | 7   | 4                              | 17                                     | 102  | 10   | 92                             | 82  | 51  | 32                                    | 5  |
| 6                                   | Tweed                                       | 352                                      | 140                                    | 97                                  | 64                                     | 21   | 29                                 | 54  | 100   | 187                                | 12                                 | 122  | 50                    | 172     | 65  | 524                                    | 187                                       | 153                            | 38   | 17   | 4  | 9   | 4                              | 20                                     | 234  | 29   | 205                            | 71  | 59  | 38                                    | 21 |
| 7                                   | Port Macquarie-Hastings                     | 353                                      | 140                                    | 101                                 | 61                                     | 8  | 43                                 | 26  | 72  | 198                                | 58                                 | 71   | 55                    | 126     | 45  | 480                                    | 198                                       | 98                             | 26   | 13   | 2  | 7   | 4                              | 9                                      | 103  | 40   | 64                             | 70  | 23  | 83                                    | 8  |
| 9                                   | Wagga Wagga (NO WS)                         | 354                                      | 29                                     | 311                                 | 8                                      | 0  | 6                                  | 54  | 36  | 226                                | 39                                 | 64   | 0                     | 64      | 30  | 418                                    | 226                                       | 90                             | 17   | 25   | 16   | 4   | 5                              | 25                                     | 235  | 137  | 99                             | 105   | 219   |                                       |    |
| 10                                  | Coffs Harbour                               | 418                                      | 149                                    | 122                                 | 78                                     | 15   | 55                                 | 72  | 123   | 208                                | 15                                 | 133  | 67                    | 201     | 65  | 619                                    | 208                                       | 196                            | 40   | 25   | 9  | 10  | 6                              | 23                                     | 245  | 56   | 189                            | 67  | 47  | 41                                    | 15 |
| 11                                  | Albury City                                 | 273                                      | 98                                     | 77                                  | 46                                     | 3  | 49                                 | 29  | 54  | 147                                | 42                                 | 112  | 8                     | 120     | 65  | 393                                    | 147                                       | 83                             | 29   | 22   | 0  | 14  | 7                              | 16                                     | 129  |  | 129                            | 79  | 35  | 32                                    | 3  |
| 13                                  | Tamworth Regional                           | 256                                      | 99                                     | 89                                  | 43                                     | 3  | 22                                 | 65  | 26  | 165                                |                                    | 54   | 115                   | 169     | 64  | 425                                    | 165                                       | 91                             | 10   | 21   | 7  | 10  | 4                              | 25                                     | 232  | 80   | 151                            | 62  | 57  | 45                                    | 3  |
| 15                                  | Eurobodalla                                 | 314                                      | 61                                     | 186                                 | 47                                     | 19   | 0                                  | 61  | 96  | 149                                | 8                                  | 187  | 0                     | 187     | 97  | 501                                    | 149                                       | 157                            | 50   | 13   | 6  | 4   | 3                              | 32                                     | 209  | 158  | 50                             | 78  | 88  | 19                                    | 19 |
| 17                                  | Queanbeyan                                  | 173                                      | 35                                     | 83                                  | 27                                     | 27   | 1                                  | 39  | 20  | 104                                | 9                                  | 134  | 70                    | 205     | 96  | 377                                    | 104                                       | 59                             | 9  | 23   | 8  | 5   | 10                             | 18                                     | 201  | 123  | 78                             | 49  | 42  | 16                                    | 27 |
| 19                                  | Orange                                      | 232                                      | 33                                     | 140                                 | 39                                     | 19   | 0                                  | 42  | 13  | 134                                | 43                                 | 139  | 39                    | 178     | 75  | 409                                    | 134                                       | 55                             | 5  | 8  | 3  | 0   | 5                              | 18                                     | 154  | 58   | 96                             | 56  | 76  | 7                                     | 19 |
| 18                                  | Dubbo                                       | 193                                      | 31                                     | 124                                 | 37                                     | 2  |                                    | 25  | 38  | 116                                | 13                                 | 142  | 15                    | 156     | 92  | 350                                    | 116                                       | 64                             | 23   | 49   | 16   | 19  | 13                             | 15                                     | 102  | 102  |                                | 68  | 74  | 14                                    | 2  |
| 16                                  | Wingecarribee                               | 250                                      | 101                                    | 77                                  | 43                                     | 24   | 5                                  | 54  | 51  | 133                                | 13                                 | 81   | 108                   | 189     | 57  | 439                                    | 133                                       | 105                            | 15   | 11   | 3  | 3   | 5                              | 16                                     | 153  |  | 153                            | 40  | 62  | 20                                    | 24 |
| 14                                  | Clarence Valley                             | 317                                      | 110                                    | 95                                  | 52                                     | 28   | 33                                 | 32  | 68  | 201                                | 16                                 | 91   | 54                    | 145     | 75  | 462                                    | 201                                       | 100                            | 35   | 11   | 2  | 5   | 3                              | 16                                     | 112  | 5  | 107                            | 104   | 64  | 46                                    | 28 |
| 21                                  | Bathurst Regional                           | 251                                      | 102                                    | 113                                 | 34                                     | 0  | 1                                  | 63  | 42  | 145                                | 0                                  | 172  | 13                    | 185     | 71  | 435                                    | 145                                       | 105                            | 16   | 20   | 15   | 3   | 2                              | 24                                     | 250  | 15   | 235                            | 56  | 78  | 36                                    | 0  |
| 24                                  | Ballina                                     | 389                                      | 153                                    | 134                                 | 92                                     |  | 10                                 | 38  | 110   | 223                                | 18                                 | 213  | 44                    | 258     | 67  | 647                                    | 223                                       | 148                            | 29   | 14   | 1  | 10  | 3                              | 10                                     | 166  |  | 166                            | 58  | 116   | 30                                    |    |
| 22                                  | Lismore                                     | 324                                      | 157                                    | 79                                  | 36                                     | 33   | 19                                 | 68  | 44  | 198                                | 14                                 | 89   | 41                    | 130     | 42  | 454                                    | 198                                       | 113                            | 14   | 17   | 1  | 11  | 5                              | 22                                     | 244  | 23   | 221                            | 63  | 69  | 54                                    | 33 |
| 23                                  | Bega Valley                                 | 455                                      | 82                                     | 349                                 | 20                                     |  | 4                                  | 75  | 102   | 273                                | 6                                  | 114  | 171                   | 285     | 155   | 740                                    | 273                                       | 177                            | 56   | 22   | 7  | 10  | 4                              | 41                                     | 227  | 127  | 100                            | 148   | 269   |                                       |    |
| 27                                  | Byron                                       | 530                                      | 129                                    | 256                                 | 75                                     | 38   | 32                                 | 102   | 114   | 296                                | 18                                 | 132  | 17                    | 149     | 51  | 680                                    | 296                                       | 216                            | 39   | 15   | 5  | 6   | 4                              | 35                                     | 432  | 305  | 127                            | 102   | 127   | 52                                    | 38 |
| 26                                  | Essential Energy                            | 254                                      | 177                                    | 68                                  | 8                                      | 1  |                                    | 93  | 36  | 125                                |                                    | 41   | 38                    | 78      | 56  | 332                                    | 125                                       | 128                            | 25   | 31   |  | 25  | 7                              | 66                                     | 367  | 4  | 363                            | 90  | 67  | 57                                    | 1  |
| 20                                  | Goulburn Mulwaree                           | 226                                      | 78                                     | 80                                  | 36                                     | 3  | 29                                 | 66  | 28  | 125                                | 7                                  | 72   | 32                    | 104     | 58  | 330                                    | 125                                       | 94                             | 16   | 13   | 8  | 2   | 4                              | 36                                     | 247  |  | 247                            | 69  | 57  | 8                                     | 3  |
| 25                                  | Kempsey                                     | 379                                      | 146                                    | 143                                 | 51                                     | 16   | 23                                 | 69  | 89  | 216                                | 5                                  | 82   | 103                   | 184     | 79  | 563                                    | 216                                       | 158                            | 38   | 10   | 3  | 4   | 3                              | 29                                     | 247  | 5  | 241                            | 92  | 111   | 39                                    | 16 |
| Medians (% of LWUs basis)           |   | 100                                      | 118                                    | 41                                  | 6                                      | 13   | 54                                 | 70  | 155   | 13                                 | 113                                | 43   | 170                   | 65      | 447   | 155                                    | 110                                       | 28                             | 17   | 5  | 7  | 4   | 21                             | 218                                    | 57   | 139  | 69                             | 68  | 32  | 8                                     |    |
| LWUs with 3,001 - 10,000 Properties |   |  |  |                                     |  |  |                                    |   |   |                                    |                                    |  |                       |         |   |  |   |                                |  |  |  |   |                                |  |  |  |                                |   |   |                                       |    |
| 29                                  | Armidale Dumaresq                           | 161                                      | 144                                    | -70                                 | 11                                     | 0  | 76                                 | 84  | 2   | 145                                | -70                                | 47   | 19                    | 66      | 25  | 227                                    | 145                                       | 86                             | 1  | 9  |  | 8   | 1                              | 32                                     | 298  |  | 298                            | 55  |   | 58                                    |    |
| 31                                  | Lithgow                                     | 416                                      | 274                                    |                                     | 55                                     |  | 87                                 | 63  | 53  | 300                                |                                    | 113  | 38                    | 150     | 52  | 566                                    | 300                                       | 116                            | 18   | 11   |  | 9   | 2                              | 22                                     | 291  |  | 291                            | 105   |   | 168                                   |    |
| 30A                                 | Hawkesbury (NO WS)                          | 292                                      | 26                                     | 226                                 | 0                                      | 0  | 40                                 | 143   | 24  | 121                                | 4                                  | 71   | 199                   | 270     | 87  | 563                                    | 121                                       | 167                            | 8  | 8  |  | 8   |                                | 46                                     | 597  | 597  |                                | 39  | 80  | 2                                     |    |
| 30                                  | Griffith                                    | 378                                      | 41                                     | 255                                 | 56                                     | 22   | 4                                  | 84  | 116   | 159                                | 19                                 | 163  | 49                    | 212     | 71  | 590                                    | 159                                       | 199                            | 38   | 28   | 22   | 2   | 4                              | 28                                     | 262  | 221  | 40                             | 53  | 78  | 17                                    | 22 |
| 33                                  | Richmond Valley                             | 286                                      | 112                                    | 114                                 | 36                                     | 6  | 18                                 | 43  | 78  | 155                                | 11                                 | 212  | 98                    | 310     | 113   | 596                                    | 155                                       | 120                            | 28   | 17   | 5  | 8   | 3                              | 16                                     | 144  | 101  | 43                             | 57  | 59  | 51                                    | 6  |
| 32                                  | Mid-Western Regional                        | 207                                      | 106                                    | 53                                  | 37                                     | 11   |                                    | 68  | 42  | 97                                 |                                    | 66   | 96                    | 162     | 97  | 369                                    | 97  | 110                            | 25   | 22   | 9  | 5   | 8                              | 41                                     | 220  |  | 220                            | 58  | 36  | 29                                    | 11 |
| 34                                  | Nambucca (Groundwater)                      | 278                                      | 178                                    | 46                                  | 51                                     | 0  | 3                                  | 27  | 71  | 134                                | 46                                 | 104  | 38                    | 142     | 55  | 420                                    | 134                                       | 98                             | 27   | 8  |  | 5   | 3                              | 11                                     | 90   |  | 90                             | 52  |   | 105                                   |    |
| 35                                  | Singleton                                   | 174                                      | 81                                     | 67                                  | 26                                     | 1  |                                    | 60  | 35  | 77                                 | 1                                  | 61   | 62                    | 123     | 62  | 297                                    | 77  | 95                             | 18   | 13   |  | 13  | 0                              | 31                                     | 228  | 74   | 154                            | 39  | 46  | 5                                     | 1  |
| 37                                  | Inverell                                    | 211                                      | 60                                     | 116                                 | 35                                     | 0  | 0                                  | 60  | 54  | 97                                 | 0                                  | 28   | 66                    | 94      | 46  | 305                                    | 97  | 114                            | 26   | 12   | 8  |   | 4                              | 30                                     | 219  |  | 219                            | 48  | 79  |                                       |    |
| 41                                  | Muswellbrook                                | 210                                      | 148                                    | 35                                  | 20                                     | 8  |                                    | 39  | 65  | 87                                 | 18                                 | 87   | 79                    | 165     | 99  | 375                                    | 87  | 105                            | 39   | 25   | 4  | 13  | 8                              | 24                                     | 128  |  | 128                            | 52  | 14  | 65                                    | 8  |
| 36                                  | Parkes                                      | 191                                      | 106                                    | 75                                  | 4                                      | 0  | 6                                  | 85  | 0   | 106                                | 0                                  | 100  | 11                    | 112     | 67  | 303                                    | 106                                       | 85                             | 0  | 0  |  |   |                                | 52                                     | 301  |  | 301                            | 64  | 75  | 21                                    |    |
| 42                                  | Corowa                                      | 325                                      | 102                                    | 164                                 | 36                                     | 21   | 3                                  | 38  | 90  | 160                                | 38                                 | 98   |                       | 98      | 58  | 424                                    | 160                                       | 128                            | 53   | 7  | 2  | 3   | 2                              | 22                                     | 128  | 10   | 118                            | 94  | 98  | 23                                    | 21 |

Table 18 - Sewerage - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY | OPERATION & MAINTENANCE (O&M) COST*         |                          |           |        |           |                      |                                |                  |                  | MANAGEMENT COST (A)* |            |                           |                       | OMA* | O&M COST COMPONENTS for TYPES of ASSET                     |            |              |          |          |                |                  |             |            |          |                |                  |           |                |                  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               | Total<br>O&M Cost<br><br>(\$/prop)<br>(66a) | Components (1) - Process |           |        |           |                      | Components (2) - Type of Asset |                  |                  |                      | Components |                           |                       |      | Total OMA<br>Cost<br><br>(\$/prop)<br>(76b)<br><br>2014/15 | Components |              | Pumping  |          |                |                  |             | Sewer Main |          |                |                  | Treatment |                |                  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |   | Maintenance              | Operation | Energy | Chemicals | Effluent & Biosolids | Mains                          | Pumping Stations | Sewage Treatment | Other                | Admin      | Engineering & Supervision | Total Management Cost |      |  | Treatment  | Reticulation | O&M Cost | O&M Cost | Operation Cost | Maintenance Cost | Energy Cost | O&M Cost   | O&M Cost | Operation Cost | Maintenance Cost | O&M Cost  | Operation Cost | Maintenance Cost | Chemical |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |   |                          |           |        |           |                      |                                |                  |                  |                      |            |                           |                       |      |  |            |              |          |          |                |                  |             |            |          |                |                  |           |                |                  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 18 - Sewerage - benchmarking cost data (operation, maintenance and management)

| WATER UTILITY  | OPERATION & MAINTENANCE (O&M) COST*         |                          |                       |                    |                       |                                   | MANAGEMENT COST (A)*           |                                 |                                 |                   | OMA*              | O&M COST COMPONENTS for TYPES of ASSET   |                       |   |                       |                          |                                |                      |   |                                 |                            |                                |                      |                            |                                 |                                |                               |                                 |                      |    |  |
|--|---|--------------------------|-----------------------|--------------------|-----------------------|-----------------------------------|--------------------------------|---------------------------------|---------------------------------|-------------------|-------------------|--|-----------------------|---|-----------------------|--------------------------|--------------------------------|----------------------|---|---------------------------------|----------------------------|--------------------------------|----------------------|----------------------------|---------------------------------|--------------------------------|-------------------------------|---------------------------------|----------------------|----|--|
|  | Total<br>O&M Cost<br><br>(\$/prop)<br>(66a) | Components (1) - Process |                       |                    |                       |                                   | Components (2) - Type of Asset |                                 |                                 |                   | Components        |  |                       | Total OMA<br>Cost<br><br>(\$/prop)<br>(76b) | Components            |                          | Pumping                        |                      |   |                                 |                            | Sewer Main                     |                      |                            |                                 | Treatment                      |                               |                                 |                      |    |  |
|  |   | Maintenance<br><br>(66)  | Operation<br><br>(67) | Energy<br><br>(68) | Chemicals<br><br>(69) | Effluent & Biosolids<br><br>(69a) | Mains<br><br>(70)              | Pumping<br>Stations<br><br>(71) | Sewage<br>Treatment<br><br>(72) | Other<br><br>(73) | Admin<br><br>(74) | Engineering &<br>Supervision<br><br>(75) | Total Management Cost |   | Treatment<br><br>(77) | Reticulation<br><br>(78) | O&M Cost<br><br>(c/kL)<br>(79) | O&M Cost<br><br>(80) | Operation<br>Cost<br><br>(\$'000/pumping station)<br>(81) | Maintenance<br>Cost<br><br>(82) | Energy<br>Cost<br><br>(83) | O&M Cost<br><br>(c/kL)<br>(85) | O&M Cost<br><br>(86) | Operation Cost<br><br>(87) | Maintenance<br>Cost<br><br>(88) | O&M Cost<br><br>(c/kL)<br>(89) | Operation<br>Cost<br><br>(90) | Maintenance<br>Cost<br><br>(91) | Chemical<br><br>(92) |    |  |
|  |   |                          |                       |                    |                       |                                   |                                |                                 |                                 |                   |                   |  |                       |   |                       |                          |                                |                      |   |                                 |                            |                                |                      |                            |                                 |                                |                               |                                 |                      |    |  |
|  |   |                          |                       |                    |                       |                                   |                                |                                 |                                 |                   |                   |  |                       |   |                       |                          |                                |                      |   |                                 |                            |                                |                      |                            |                                 |                                |                               |                                 |                      |    |  |
| 2014/15  |   |                          |                       |                    |                       | 2014/15                           |                                |                                 |                                 | 2014/15           |                   |  | 2014/15               | 2014/15                                     |                       | 2014/15                  |                                |                      |   |                                 | 2014/15                    | 2014/15                        |                      |                            |                                 | 2014/15                        | 2014/15                       |                                 |                      |    |  |
| LWUs with 200 - 1,500 Properties                         |   |                          |                       |                    |                       |                                   |                                |                                 |                                 |                   |                   |  |                       |   |                       |                          |                                |                      |   |                                 |                            |                                |                      |                            |                                 |                                |                               |                                 |                      |    |  |
| 84 Gilgandra   | 289   | 230                      | 32                    | 27                 | 0                     | 0                                 | 37                             | 61                              | 154                             | 36                | 74                | 0  | 74                    | 39  | 363                   | 154                      | 98                             | 32                   | 4   |                                 | 4                          |                                | 19                   | 124                        |                                 | 124                            | 80                            | 14                              | 114                  |    |  |
| 73 Upper Lachlan   | 326   | 82                       | 171                   | 58                 | 7                     | 8                                 | 31                             | 84                              | 203                             | 7                 | 70                | 80                                       | 150                   | 42  | 476                   | 203                      | 116                            | 24                   | 16  | 5                               | 2                          | 10                             | 9                    | 86                         | 50                              | 36                             | 57                            | 122                             | 58                   | 7  |  |
| 87 Bourke  | 252   | 131                      | 100                   | 21                 | 0                     | 0                                 | 64                             | 125                             | 64                              | 0                 | 165               | 38                                       | 203                   | 123   | 455                   | 64                       | 188                            | 76                   | 19  | 4                               | 11                         | 3                              | 39                   | 226                        | 29                              | 197                            | 39                            | 64                              |                      |    |  |
| 86 Hay   | 279   | 82                       | 158                   | 39                 |                       |                                   | 44                             | 84                              | 151                             |                   | 199               | 4  | 203                   | 92  | 482                   | 151                      | 128                            | 38                   | 14  | 8                               | 3                          | 2                              | 20                   | 151                        |                                 | 151                            | 68                            | 107                             | 20                   |    |  |
| 83 Oberon  | 276   | 22                       | 202                   | 39                 | 13                    | 0                                 | 21                             | 38                              | 217                             | 0                 | 84                | 39                                       | 123                   | 43  | 399                   | 217                      | 59                             | 14                   | 12  | 12                              |                            | 1                              | 7                    | 68                         |                                 | 68                             | 76                            | 165                             | 2                    | 13 |  |
| 81 Gwydir  | 270   | 70                       | 161                   | 30                 | 8                     | 2                                 | 22                             | 56                              | 193                             |                   | 53                |  | 53                    | 24  | 323                   | 193                      | 77                             | 26                   | 8   | 5                               | 2                          | 1                              | 10                   | 61                         | 2                               | 59                             | 89                            | 127                             | 35                   | 8  |  |
| 85 Uralla  | 270   | 179                      | 0                     | 0                  | 27                    | 63                                | 52                             | 12                              | 138                             | 69                | 84                | 11                                       | 95                    | 81  | 364                   | 138                      | 63                             | 10                   | 2   |                                 | 2                          |                                | 44                   | 166                        |                                 | 166                            | 118                           |                                 | 47                   | 27 |  |
| 95 Weddin (NO WS)  | 218   | 28                       | 180                   | 11                 |                       |                                   | 37                             |                                 | 181                             |                   | 67                | 49                                       | 116                   | 66  | 334                   | 181                      | 37                             |                      |   |                                 |                            |                                | 21                   | 113                        | 103                             | 10                             | 103                           | 146                             | 24                   |    |  |
| 89 Bogan   | 175   | 79                       | 79                    | 9                  | 7                     | 0                                 | 139                            | 29                              | 7                               | 0                 | 15                | 267                                      | 281                   | 150   | 456                   | 7                        | 168                            | 16                   | 7   | 5                               |                            | 2                              | 74                   | 665                        | 285                             | 380                            | 4                             |                                 |                      | 7  |  |
| 76 Harden  | 327   | 197                      | 111                   | 17                 |                       | 2                                 | 193                            |                                 | 127                             | 7                 | 113               | 77                                       | 189                   | 30  | 516                   | 127                      | 193                            |                      |   |                                 |                            |                                | 31                   | 431                        |                                 | 431                            | 20                            | 103                             | 4                    |    |  |
| 88 Wakool  | 234   | 42                       | 125                   | 66                 | 1                     | 0                                 | 50                             | 62                              | 122                             | 0                 | 52                | 63                                       | 116                   | 34  | 350                   | 122                      | 112                            | 18                   | 5   | 1                               | 1                          | 2                              | 15                   | 106                        | 60                              | 47                             | 36                            | 78                              | 8                    | 1  |  |
| 93 Tumbarumba  | 227   | 174                      | 41                    | 3                  | 9                     |                                   | 78                             | 5                               | 144                             |                   | 31                | 67                                       | 98                    | 74  | 325                   | 144                      | 83                             | 4                    | 2   |                                 | 1                          | 0                              | 59                   | 166                        | 79                              | 87                             | 109                           | 4                               | 129                  | 9  |  |
| 94 Gundagai  | 319   | 208                      | 22                    | 29                 | 18                    | 42                                | 14                             | 70                              | 233                             | 2                 | 160               | 30                                       | 190                   | 68  | 510                   | 233                      | 84                             | 25                   | 12  | 1                               | 7                          | 3                              | 5                    | 16                         |                                 | 16                             | 82                            | 13                              | 147                  | 18 |  |
| 92 Carrathool  | 163   | 125                      |                       | 37                 |                       |                                   | 22                             | 94                              | 47                              |                   | 10                | 12                                       | 22                    | 18  | 184                   | 47                       | 116                            | 77                   | 7   |                                 | 4                          | 3                              | 18                   | 78                         |                                 | 78                             | 39                            |                                 | 47                   |    |  |
| 96 Warren  | 299   | 162                      | 93                    | 44                 | 0                     | 0                                 | 84                             | 133                             | 82                              | 0                 | 118               | 71                                       | 189                   | 88  | 488                   | 82                       | 217                            | 62                   | 14  | 3                               | 6                          | 4                              | 39                   | 406                        | 18                              | 388                            | 38                            | 57                              | 21                   |    |  |
| 99 Coolamon (NO WS)                                      | 235   | 82                       | 111                   | 35                 |                       | 7                                 | 49                             | 49                              | 137                             |                   | 35                |  | 35                    | 34  | 271                   | 137                      | 98                             | 48                   | 6   |                                 | 4                          | 2                              | 48                   | 114                        |                                 | 114                            | 133                           | 111                             |                      |    |  |
| 102 Lockhart (NO WS)                                     | 194   | 131                      | 10                    | 39                 | 0                     | 15                                | 11                             | 18                              | 165                             | 0                 | 18                | 0  | 18                    | 13  | 213                   | 165                      | 30                             | 13                   | 3   |                                 | 3                          |                                | 8                    | 24                         |                                 | 24                             | 117                           | 10                              | 101                  |    |  |
| 98 Walcha  | 265   | 90                       | 163                   | 13                 |                       |                                   | 31                             | 33                              | 201                             |                   | 69                | 29                                       | 98                    | 51  | 363                   | 201                      | 64                             | 17                   | 26  | 7                               | 9                          | 10                             | 16                   | 83                         | 13                              | 70                             | 105                           | 149                             | 53                   |    |  |
| 100 Balranald  | 218   | 58                       | 146                   | 12                 | 2                     | 0                                 | 59                             | 69                              | 2                               | 87                | 53                | 0  | 53                    | 24  | 271                   | 2                        | 128                            | 32                   | 6   |                                 | 5                          | 1                              | 27                   | 132                        | 132                             |                                | 1                             |                                 |                      | 2  |  |
| 97 Bombala   | 243   | 219                      |                       | 23                 |                       |                                   | 22                             | 56                              | 165                             |                   | 130               |  | 130                   | 58  | 373                   | 165                      | 78                             | 25                   | 9   |                                 | 6                          | 3                              | 10                   | 49                         |                                 | 49                             | 73                            |                                 | 160                  |    |  |
| 101 Murrumbidgee   | 161   | 109                      | 6                     | 46                 | 0                     | 0                                 | 33                             | 59                              | 23                              | 46                |                   | 72                                       | 72                    | 40  | 233                   | 23                       | 92                             | 33                   | 4   |                                 | 2                          | 2                              | 18                   | 113                        |                                 | 113                            | 13                            |                                 | 1                    |    |  |
| 90 Guyra   | 248   | 19                       | 121                   | 25                 | 32                    | 52                                | 21                             | 25                              | 200                             | 3                 | 85                |  | 85                    | 48  | 333                   | 200                      | 46                             | 14                   | 15  |                                 | 12                         | 4                              | 12                   | 44                         | 44                              |                                | 112                           | 98                              |                      | 32 |  |
| 104 Boorowa  | 270   | 214                      | 41                    | 12                 | 0                     | 3                                 | 100                            | 38                              | 123                             | 9                 | 111               | 39                                       | 150                   | 78  | 420                   | 123                      | 138                            | 20                   | 6   | 1                               | 4                          | 2                              | 52                   | 220                        |                                 | 220                            | 64                            | 29                              | 91                   |    |  |
| 105 Brewarrina   | 400   | 129                      | 221                   | 46                 | 4                     |                                   | 75                             | 163                             | 163                             |                   | 131               | 52                                       | 183                   | 48  | 583                   | 163                      | 238                            | 43                   | 10  | 4                               | 3                          | 3                              | 20                   | 225                        |                                 | 225                            | 43                            | 154                             |                      | 4  |  |
| 106 Jerilderie   | 321   | 279                      | 9                     | 33                 | 0                     | 0                                 | 16                             | 98                              | 198                             | 9                 | 51                | 47                                       | 98                    | 55  | 419                   | 198                      | 114                            | 55                   | 8   |                                 | 7                          | 2                              | 9                    | 58                         |                                 | 58                             | 110                           |                                 | 184                  |    |  |
| 103 Central Darling                                      | 200   | 184                      |                       | 16                 |                       |                                   | 146                            | 51                              | 3                               |                   |                   |  |                       |   | 200                   | 3                        | 197                            | 24                   | 3   |                                 | 2                          | 1                              | 68                   | 235                        |                                 | 235                            | 1                             |                                 | 3                    |    |  |
| 107 Urana (NO WS)  | 350   | 297                      | 31                    | 22                 | 0                     | 0                                 | 34                             | 244                             | 72                              | 0                 | 13                | 147                                      | 159                   | 57  | 509                   | 72                       | 278                            | 87                   | 9   | 1                               | 7                          | 1                              | 12                   | 73                         |                                 | 73                             | 26                            | 13                              | 59                   |    |  |
| Medians (% of LWUs basis)<br>for 200 to 1,500 Properties |   | 129                      | 93                    | 27                 | 0                     | 0                                 | 37                             | 56                              | 144                             |                   | 70                | 38                                       | 116                   | 48  | 364                   | 144                      | 112                            | 25                   | 7   | 4                               | 4                          | 2                              | 19                   | 113                        | 50                              | 87                             | 68                            | 98                              | 47                   | 8  |  |

\* Operating cost is the OMA cost (operation, maintenance & administration (Col 76b)) which comprises the O & M Cost (operation & maintenance cost (Cols 66 to 69 or Cols 70 to 73)) PLUS Management Costs (Col 76a) which is made up of the Administration cost (Col 74) plus Engineering and Supervision cost (Col 75).



# APPENDIX A

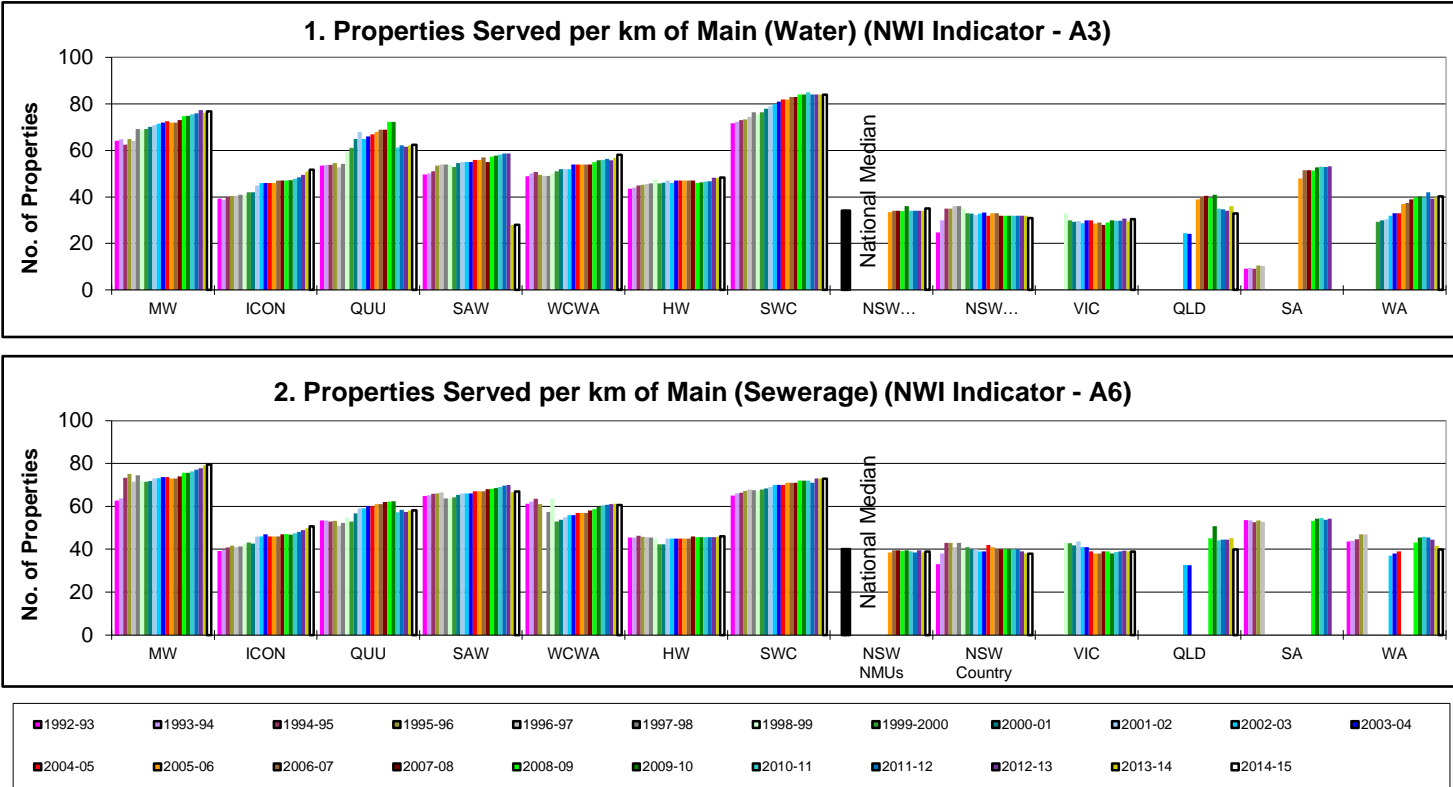
## NATIONAL PERFORMANCE COMPARISONS 1992-93 TO 2014-15

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Refer also to Appendix K on page 364.

PERFORMANCE COMPARISONS - Utility Characteristics



Metropolitan Water Utilities

|      |  |
|------|--|
| MW   | Melbourne Water Consolidated (see note 1)          |
| ICON | Icon Water (Canberra)                              |
| QUU  | Queensland Urban Utilities (Brisbane) (see note 3) |
| SAW  | SA Water Corporation (Adelaide)                    |
| WCWA | WA Water Corporation (Perth)                       |
| HW   | Hunter Water Corporation                           |
| SWC  | Sydney Water Corporation                           |

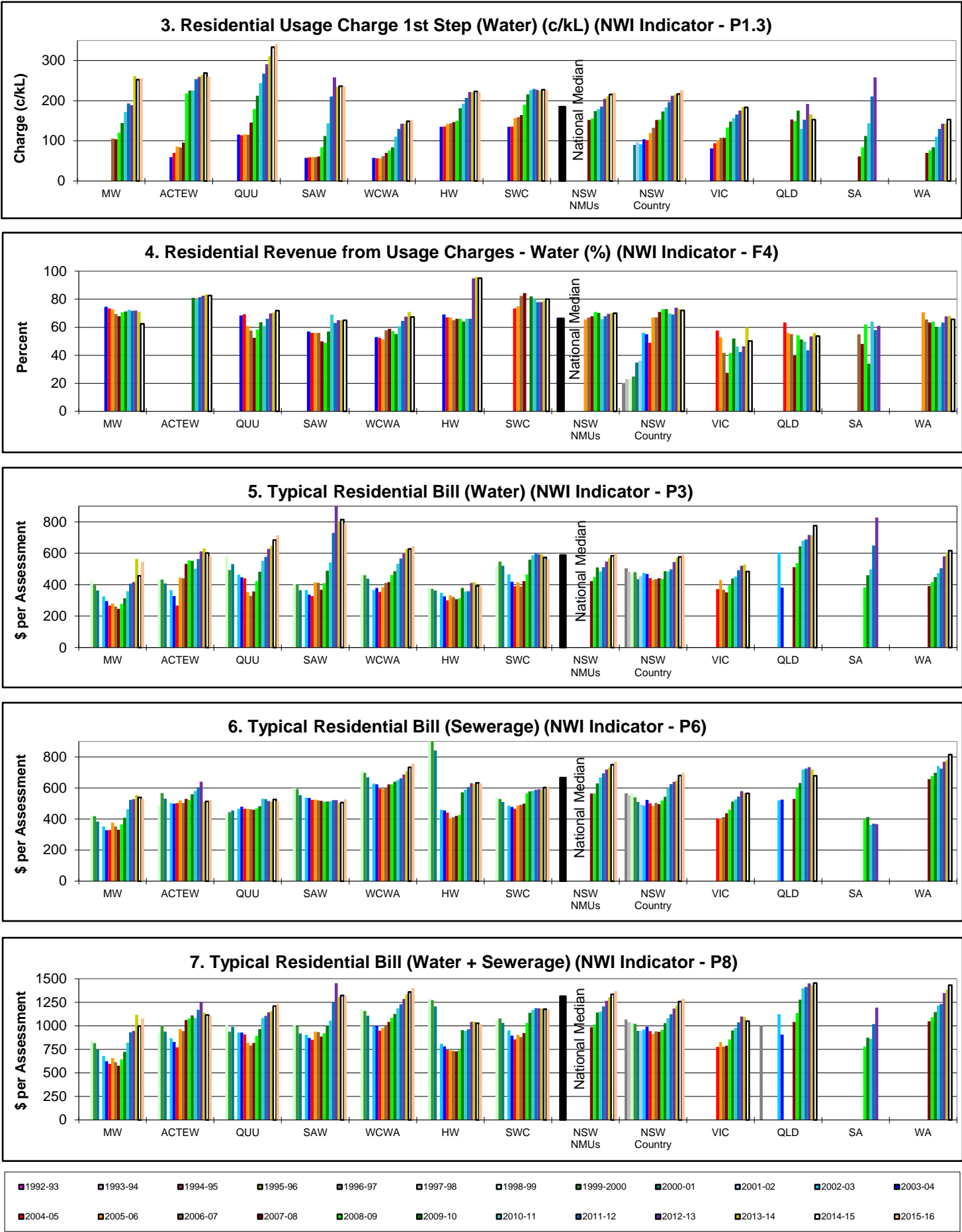
Country Water Utilities

|             |  |
|-------------|--|
| NSW NMUs    | Median of NSW regional LWUs with > 10,000 connected properties |
| NSW Country | Statewide median for all NSW regional LWUs                     |
| VIC         | VIC Country (see note 4)                                       |
| QLD         | QLD Country (see note 6)                                       |
| SA          | SA Country (see note 5)  |
| WA          | WA Country (see note 7)  |

NOTES:

1. Melbourne Water was disaggregated into 4 constituent utilities in 1994. Melbourne Water Consolidated results for 1994-95 to 2014-15 are either aggregated results of the constituent utilities or consolidated results reported in the *National Performance Report 2014-15*, *WSAA Facts* (note 2) or reported in *Urban Water Review* (note 4).
2. Metropolitan Utilities - *National Performance Report 2014-15* used to obtain results from 2001-02 to 2014-15 ([www.bom.gov.au](http://www.bom.gov.au)). *WSAA Facts 2005* and *WSAA Facts 1999* (published by the Water Services Association of Australia) used to obtain results from 1994-95 to 1999-00.
3. Queensland Urban Utilities (QUU) was formed by aggregating Brisbane Water, Ipswich City Council, Scenic Rim Regional Council, Lockyer Valley Regional Council and Somerset Regional Council. QUU commenced operations on 1 July 2010. The results shown for QUU prior to 2010-11 are those reported in the NPR and WSAA Facts for Brisbane Water.
4. Victorian Country - *Urban Water Review 1998* and *2004-2005*, (published by the Victorian Water Industry Association) used to obtain results for Victoria Country from 1996-97 to 2004-05. Results from 2005-06 to 2014-15 obtained from median of Victorian utilities (excluding Melbourne Water and its constituents) published in the *2014-15 National Performance Report*.
5. SA Country - *Government Trading Enterprises Performance Indicators 1992-93 to 1996-97 and 1990-91 to 1994-95*, (published by Steering Committee on National Performance Monitoring of Government Trading Enterprises), used to obtain results for 1990-91 to 1996-97. Results from 2005-06 to 2012-13 obtained from median of SA NMUs (Whyalla and Mt Gambier) published in the *National Performance Report 2012-13*. **The results shown from 2005-06 do not report the overall performance of SA country utilities.** The 2012-13 results are for 2 utilities. Country SA was not reported separately in 2013-14 and 2014-15 and the 2013-14 and 2014-15 results for SAW (Adelaide) include SA Country.
6. QLD Country - *Urban Water Service Providers Queensland Report 2003-2004*, (published by Queensland Department of Natural Resources and Mines), used to obtain results from 2002-03 and 2003-04. These results are for 18 large and medium utilities and exclude Brisbane City Council. Results from 2005-06 to 2013-14 obtained from median of 10 QLD NMUs (Cairns, Mackay, Gold Coast, Gympie, Logan, Rockhampton, Toowoomba, Townsville, Unity Water, Wide Bay Water) published in the *National Performance Report 2013-14*. There is a total of approximately 70 Queensland country utilities. The 2014-15 results are the median for the 19 QLD country utilities reporting in the 2014-15 NPR.
7. WA Country - *Government Trading Enterprises Performance Indicators 1992-93 to 1996-97 and 1990-91 to 1994-95*, (published by Steering Committee on National Performance Monitoring of Government Trading Enterprises), used to obtain results for 1990-91 to 1996-97. Results from 1999-2005 obtained from *Water Performance Information* on 32 Major WA Towns 1999-2003 and 2001-2005 prepared by the Western Australia Economic Regulation Authority. The results are for regional towns and do not include Perth. Results from 2005-06 to 2014-15 obtained from median of WA NMUs (Albany, Australind/Eaton, Bunbury, Busselton, Geraldton, Kalgoorlie-Boulder, Mandurah) published in the *National Performance Report 2014-15*. **The results shown from 1999 do not report the overall performance of WA country utilities.** The 2014-15 results are for water supply and sewerage utilities for the above 7 regions.
8. Except for Graphs 3 and 5 to 7, which are in 2015-16 dollars, financial data is presented in 2014-15 dollars.
9. The National Median is the median value of the 2014-15 results published in the *National Performance Report 2014-15*.
10. Hobart and Darwin results have not been included in the graphs due to space limitations and the limited data coverage by these utilities. For Darwin, 2014-15 results for NWI indicators W12, P8, A8, C9 and H3 are 409, 1871, 21, 2 and 100% respectively. For the Tasmanian Water and Sewerage Corporation, which includes Hobart, results are available for only 3 of these indicators - W12 (172), F13 (888) and H3 (99%).

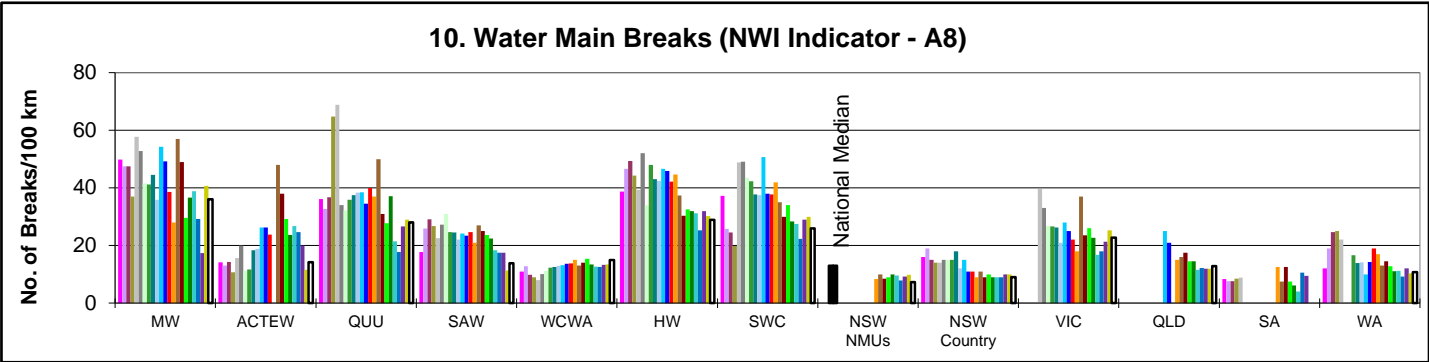
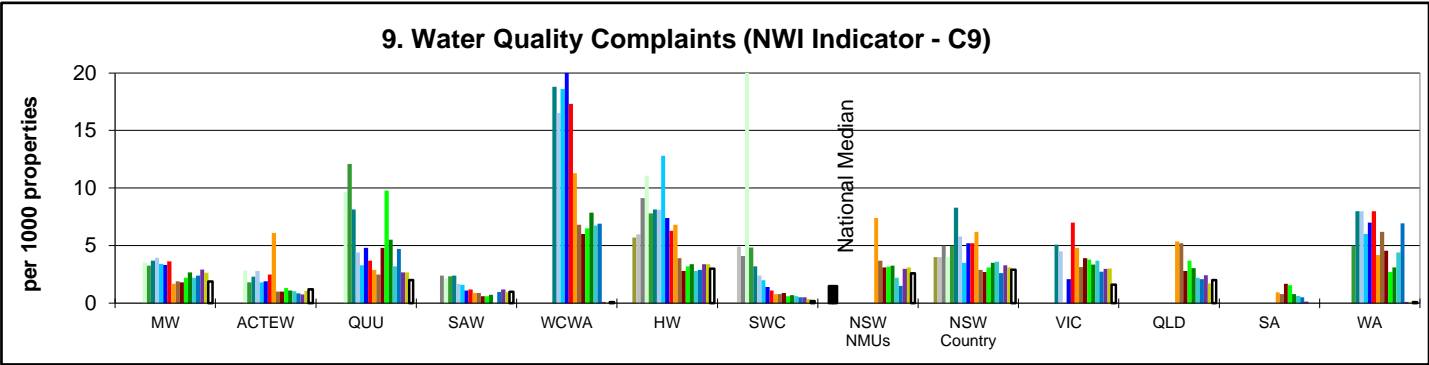
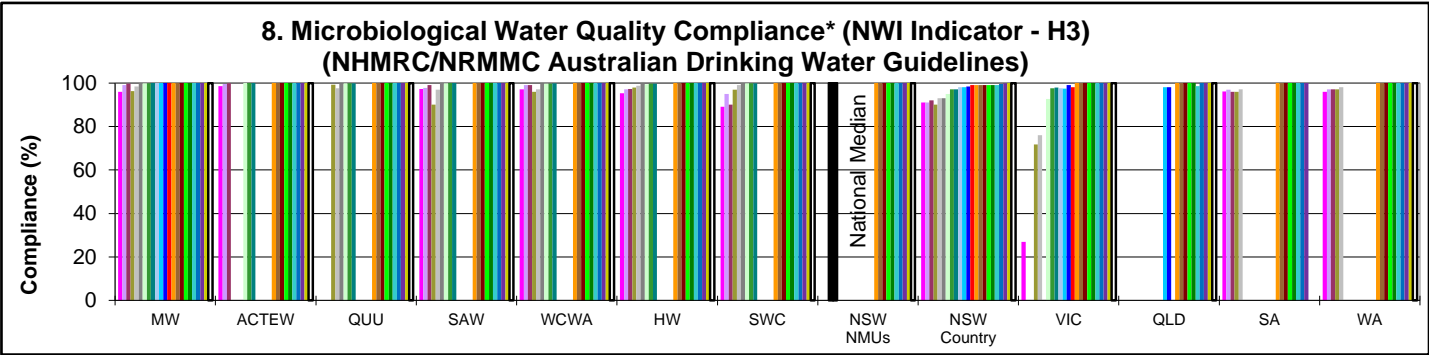
PERFORMANCE COMPARISONS - Social



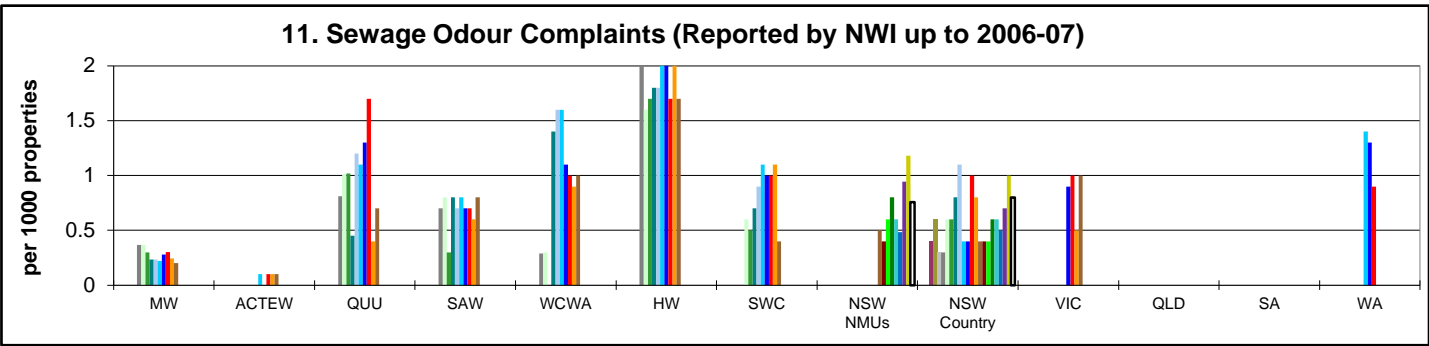
- NOTES**
- 1. The Typical Residential Bill (TRB) is the annual bill paid by a residential customer using the utility's average annual residential water supplied.
  - 2. The TRB is the principal indicator of the overall cost of a water supply or sewerage system.
  - 3. The 2015-16 Usage Charge and TRB (graphs 3 and 5 to 7) for the metropolitan water utilities have been determined from data published on each utility's website.
  - 4. As the 2009-10 to 2014-15 values for Indicator F4 were not reported by ICON Water, they have been conservatively estimated in graph 4 from the utility's reported TRB and fixed charge for these years: (TRB - Fixed Charge)/TRB x 100.



PERFORMANCE COMPARISONS - Social (Water)



PERFORMANCE COMPARISONS - Social (Sewerage)



|         |         |         |         |         |         |         |           |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 |
| 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12   | 2012-13 | 2013-14 | 2014-15 |         |

**\* Microbiological Water Quality Compliance**

1991 to 1998 results are generally on the basis of the 1987 NHMRC/AWRC Drinking Water Quality Guidelines.

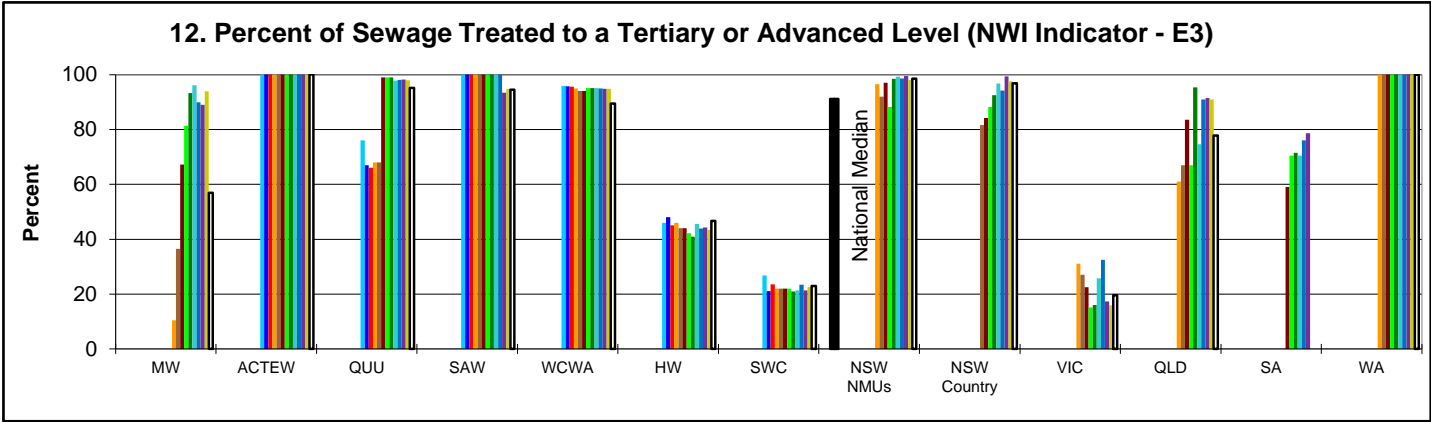
1998-99 and subsequent results are generally on the basis of E. coli in the more stringent 1996 NHMRC/ARMCANZ and 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) [refer also to page 8].

The exceptions are Victorian country utilities where results up to 2003-04 are on the basis of the less stringent 1984 World Health Organisation Guidelines and which are now on the basis of the Victorian Safe Drinking Water Regulations 2005, and also Melbourne Water where prior to 2004-05 the results are on the basis of the above 1987 Guidelines and which were subsequently on the basis of the 2004 ADWG.

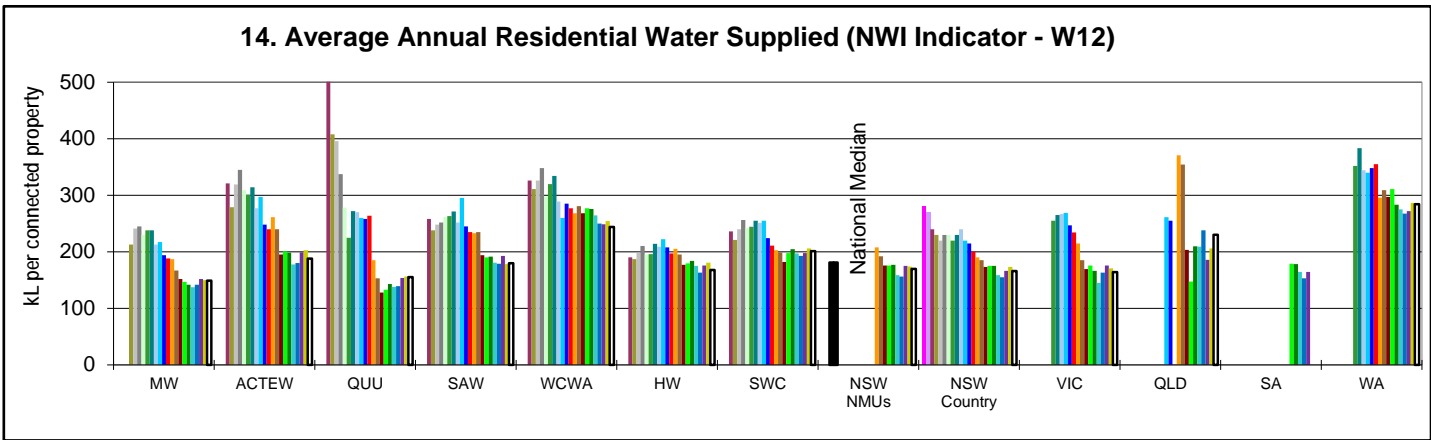
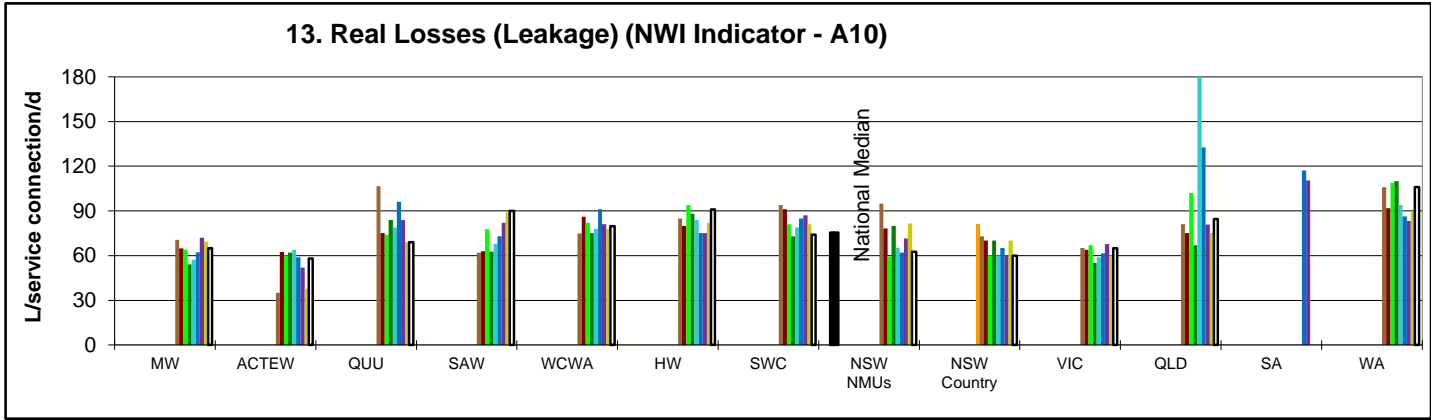
For 2005-06 to 2014-15, the results shown are for "% of population where microbiological compliance was achieved", in accordance with NWI Indicator H3.

As noted on page 7 of the 2014-15 NSW Water Supply and Sewerage Performance Monitoring Report ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), from 2012 to 2015, the public drinking water supply for 99.9% of the urban population in regional NSW complied with 2011 ADWG for both microbiological and chemical water quality. In 2014-15 99.9% of the 19,400 samples tested complied for microbiological water quality (health related) and 99.9% of the 4,800 samples tested complied for chemical water quality (health related). Refer also to Table 12 on page 183 and Appendix D1 on page 280.

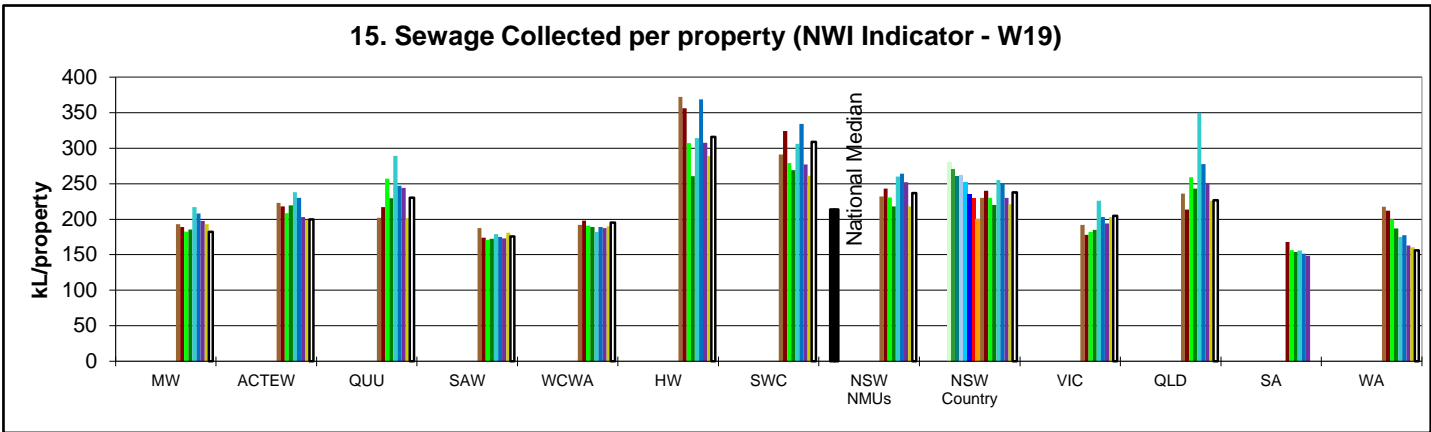
PERFORMANCE COMPARISONS - Social (Sewerage)



PERFORMANCE COMPARISONS - Environmental (Water)

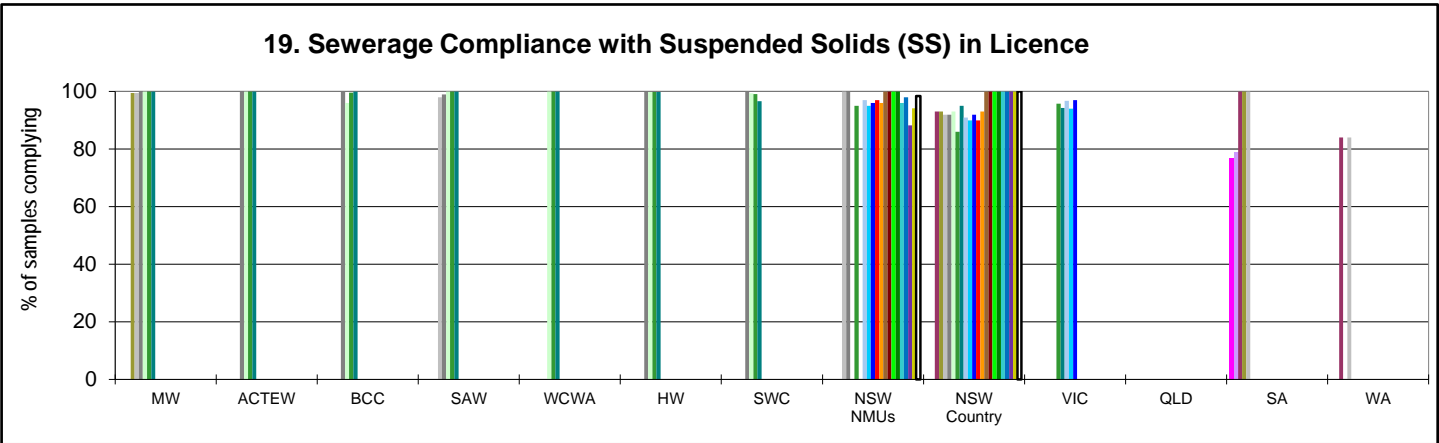
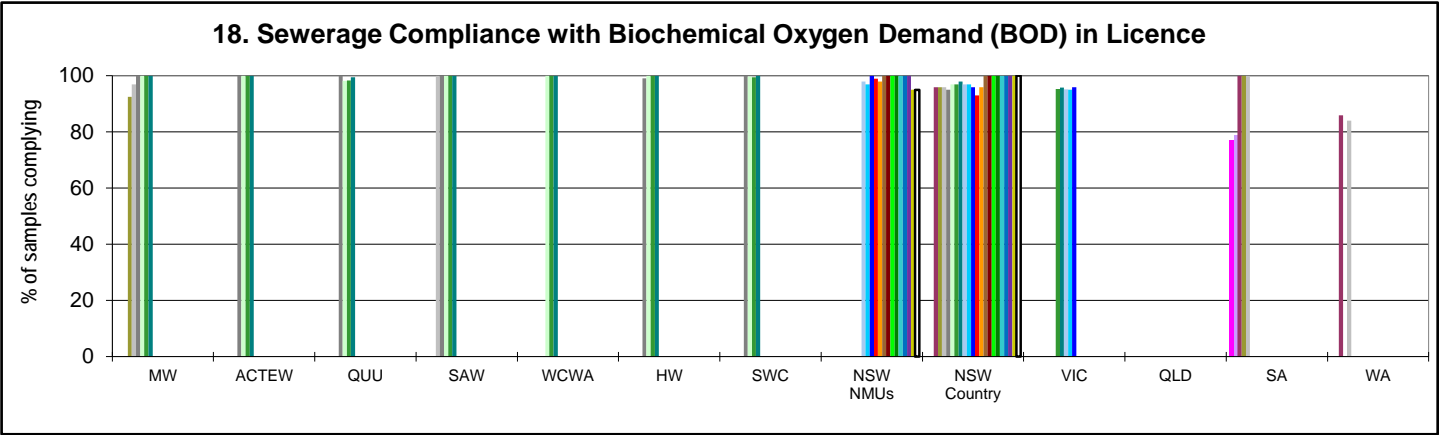
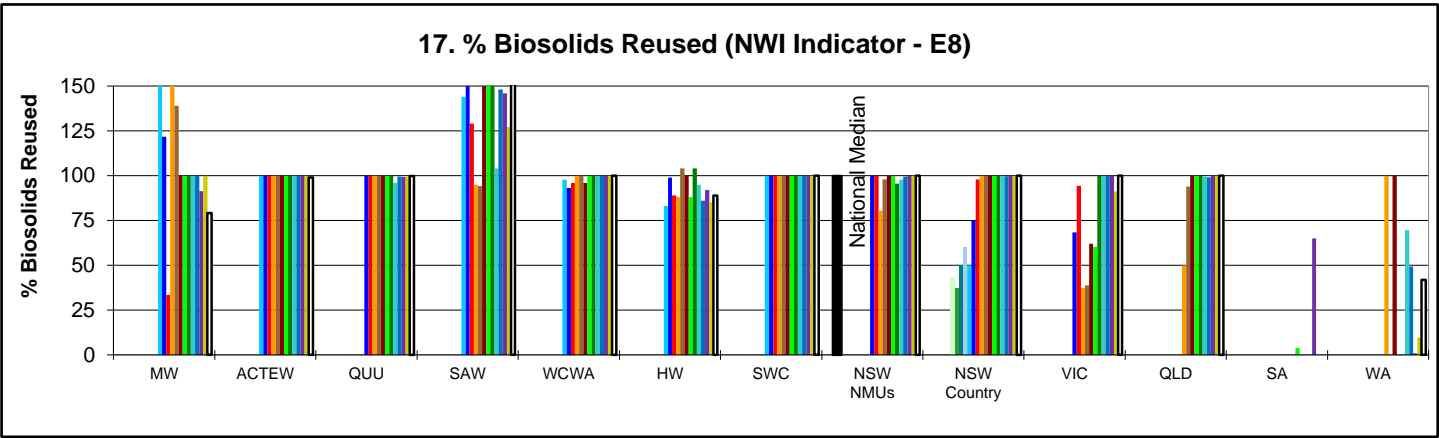
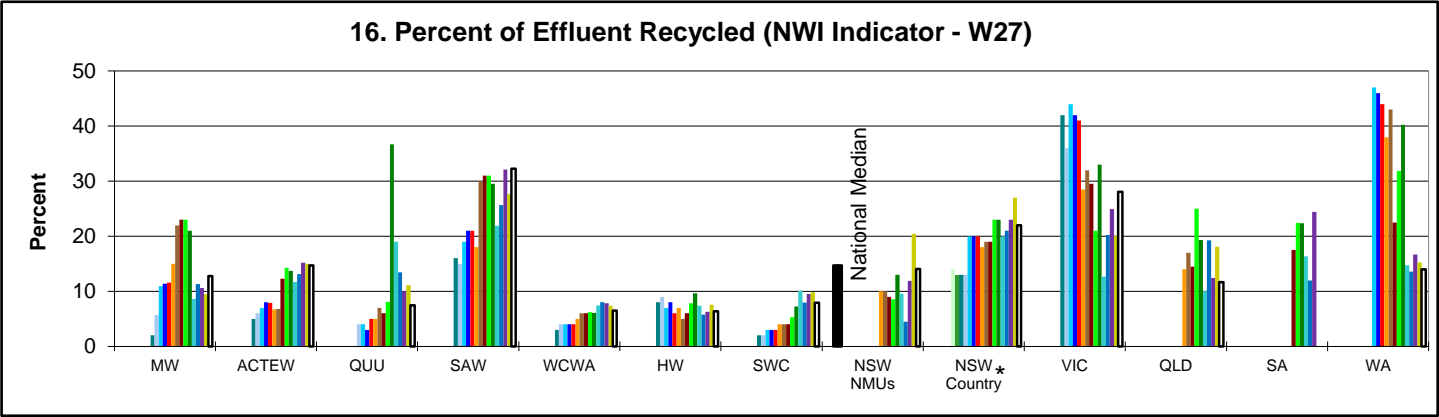


PERFORMANCE COMPARISONS - Environmental (Sewerage)



|         |         |         |         |         |         |         |           |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 |
| 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12   | 2012-13 | 2013-14 | 2014-15 |         |

PERFORMANCE COMPARISONS - Environmental (Sewerage)



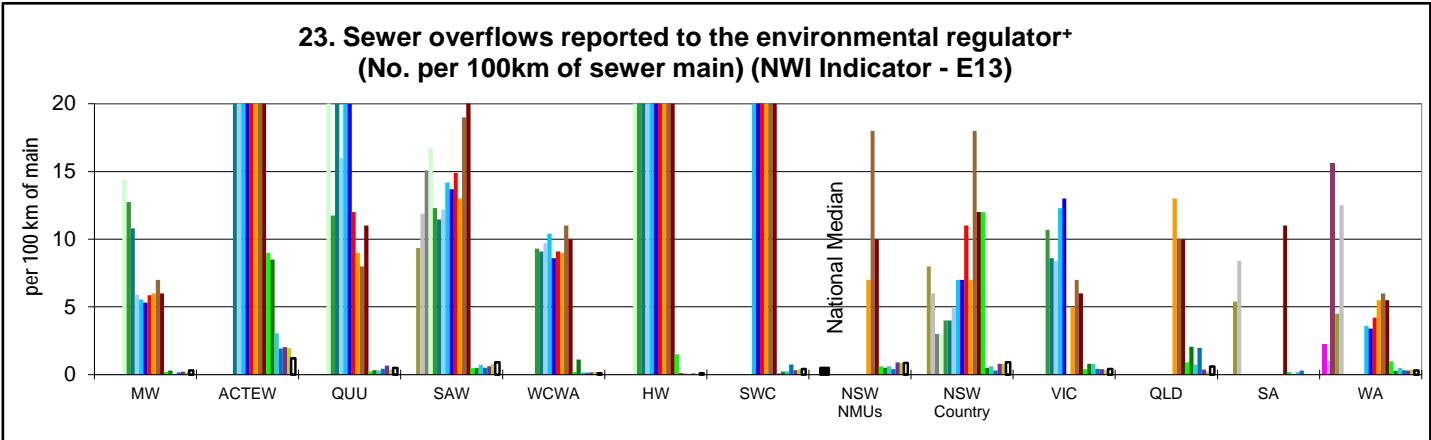
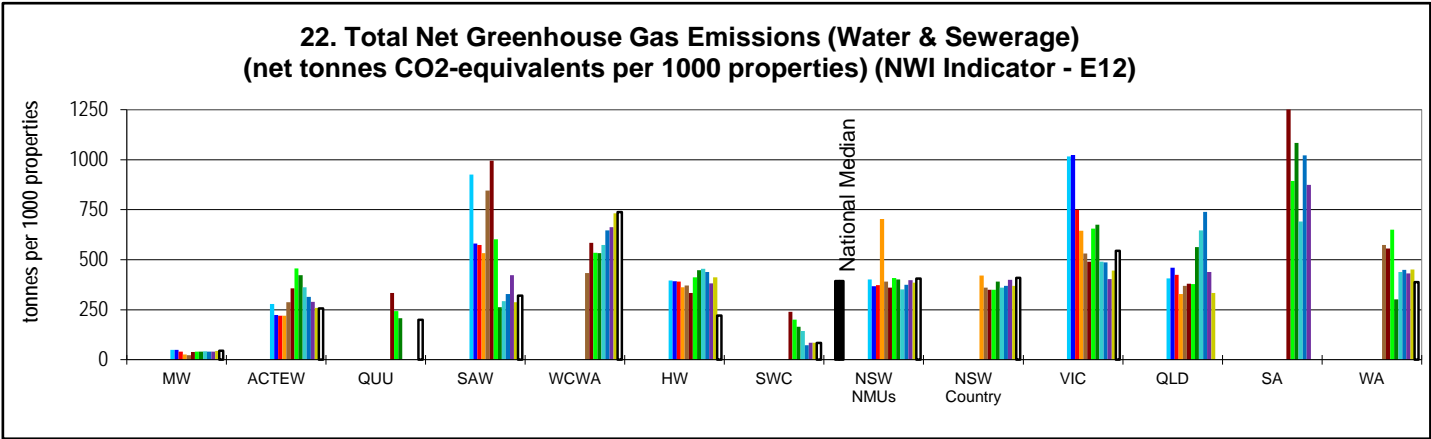
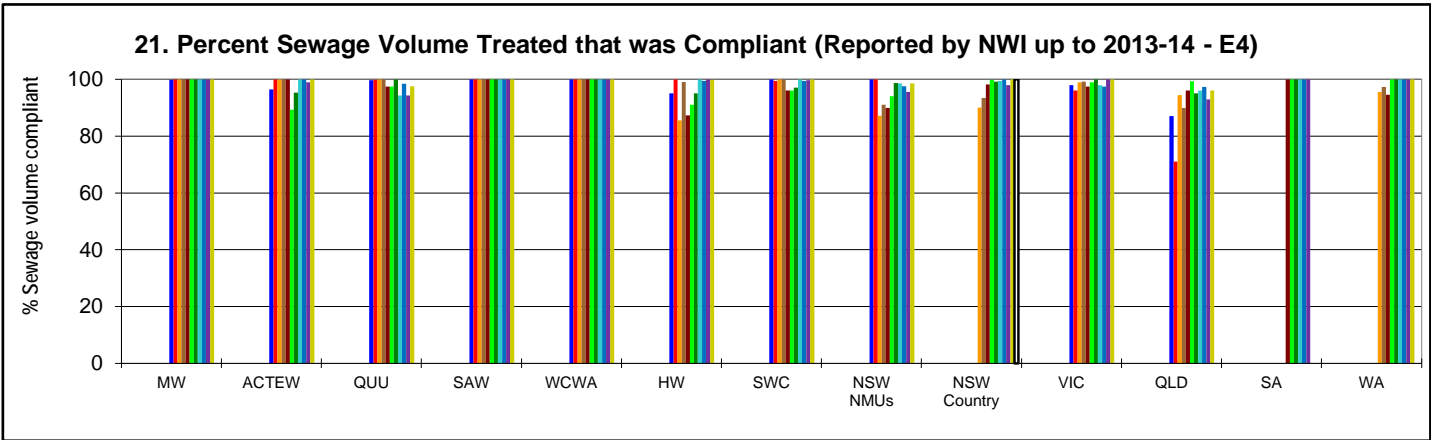
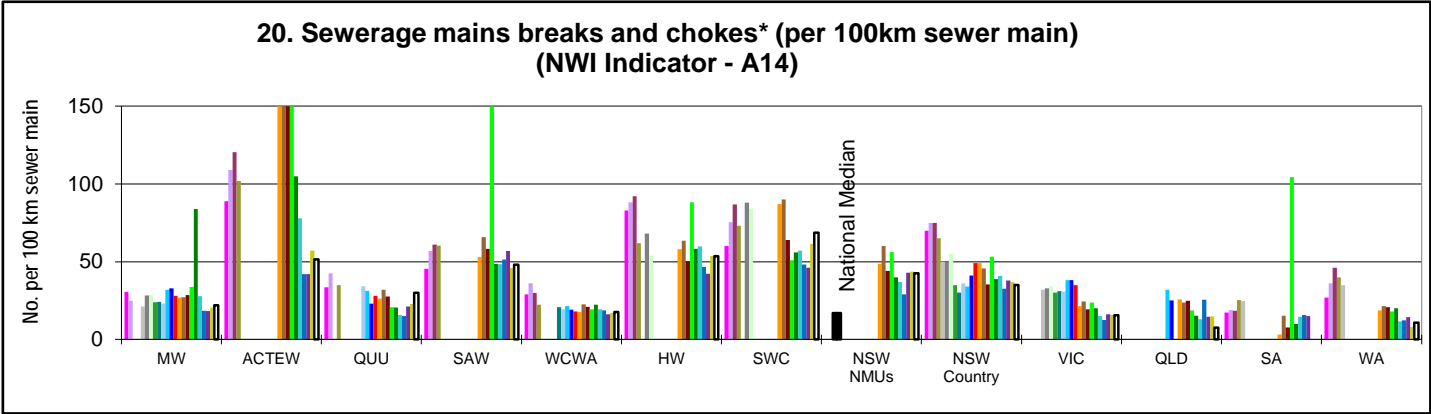
|         |         |         |         |         |         |         |           |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 |
| 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12   | 2012-13 | 2013-14 | 2014-15 |         |

**\* NSW Effluent Result**

The values shown for country NSW are the percentages of total volume of sewage collected in regional NSW that was recycled. For country NSW, 39,000 ML of wastewater was recycled in 2014-15, which is 22 per cent of the total volume of sewage collected and was carried out by 70 per cent of the utilities, mostly for agriculture. Refer also to figures 26a and 27 on page 111.



PERFORMANCE COMPARISONS - Environmental (Sewerage)

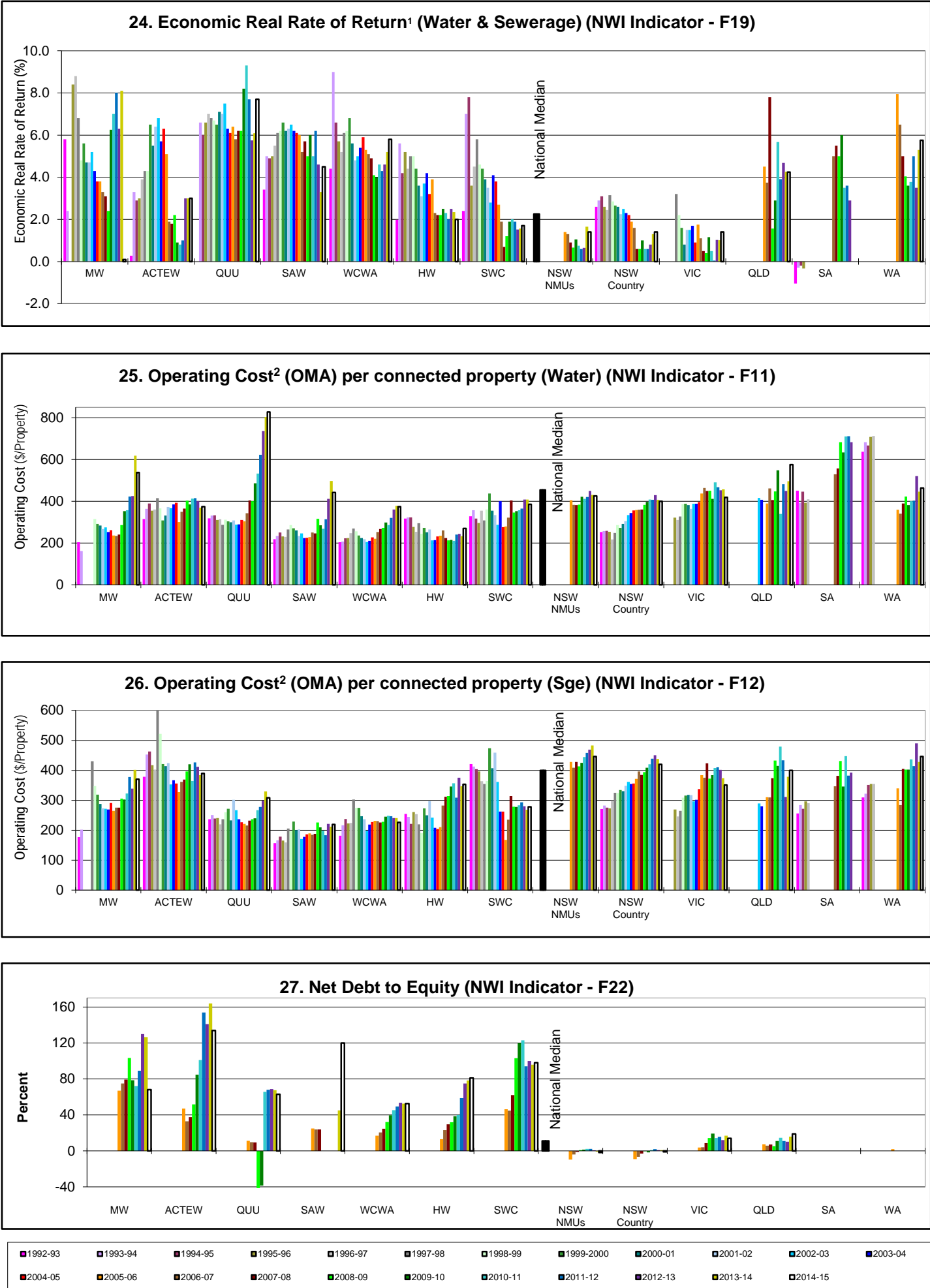


|         |         |         |         |         |         |         |           |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 |
| 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12   | 2012-13 | 2013-14 | 2014-15 |         |

\* The values shown prior to 2010-11 are the reported values for sewerage breaks and chokes for indicator A12 in the National Performance Framework 2008-09 Urban Water Performance Indicators and Definitions Handbook.

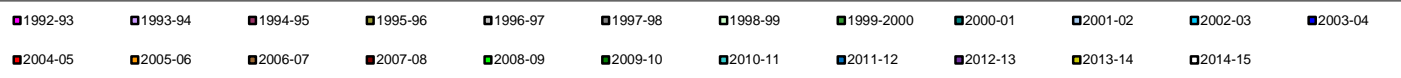
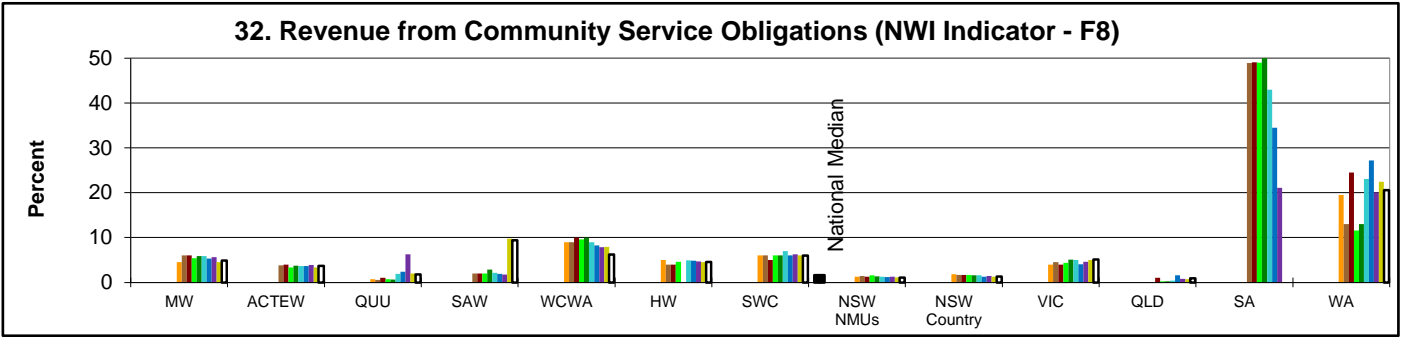
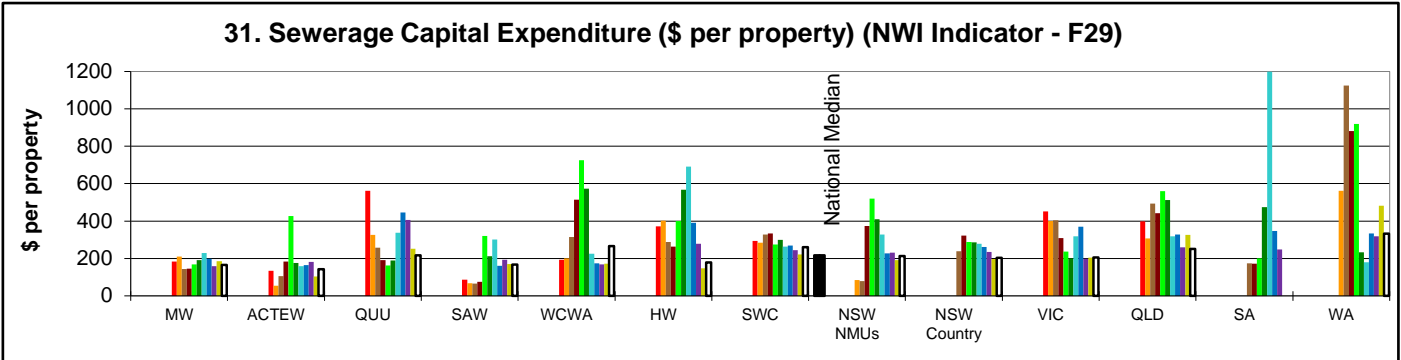
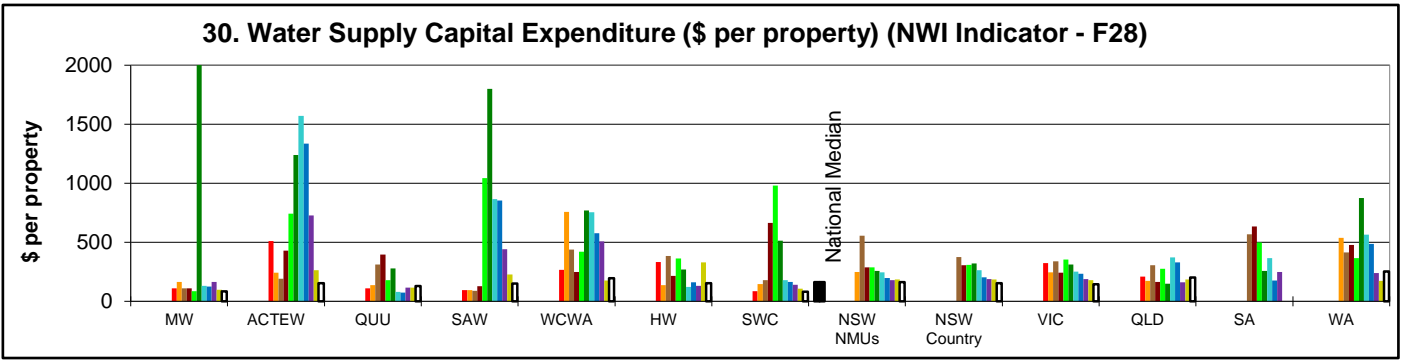
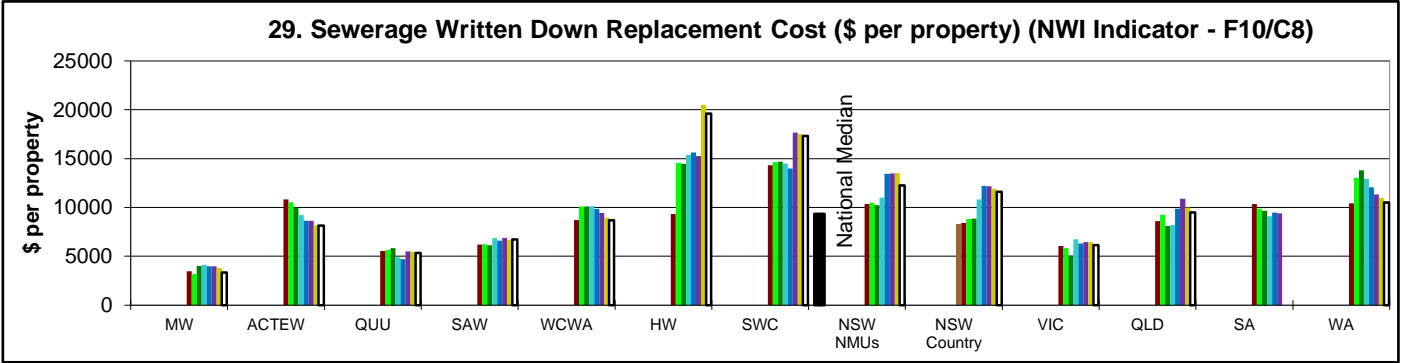
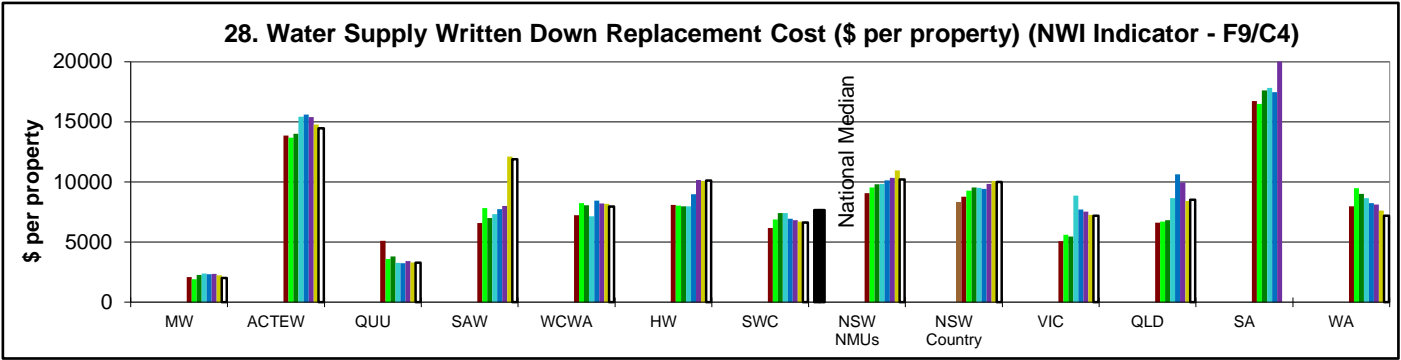
+ The values shown prior to 2008-09 are all reported sewer overflows in accordance with definition for indicator E13 in the National Performance Framework 2007-08 Urban Water Performance Indicators and Definitions Handbook.

PERFORMANCE COMPARISONS - Economic



**NOTES:** 1. As the economic real rate of return (ERRR) was not reported by utilities other than NSW NMUs and Country NSW in 2001/02 to 2004/05, the reported values for "return on assets" has been shown in graph 24 for all the other utilities for these years.  
2. Operating Cost (OMA) is the Operation, Maintenance and Administration Cost in 2014-15\$.

PERFORMANCE COMPARISONS - Economic



**NOTES:** 1. The Water Supply Capital Expenditure per property shown for Melbourne Water for 2009-10 includes the full \$3.5B capital expenditure by a private consortium for the Victorian Desalination Plant project.

2. The Water Supply Capital Expenditure per property shown for Queensland Urban Utilities (QUU) for 2009-10 includes the \$230M capital expenditure by SEQ Water and LinkWater.



# APPENDIX B: NSW PERFORMANCE MONITORING DATABASE

## Water business data

| NSW No.               | NWI No. | Indicator Group                           | Reported Indicator                           | 2014/15 | Unit | Indicator Definition  | Instruction  |
|-----------------------|---------|---|--|---------|------|---|--|
| <b>Population</b>     |         |   |  |         |      |   |  |
| WB1                   | C1      | Population served                         | Permanent                                    |         | n    | Population supplied with water in June this reporting year.   | Exclude population in non-serviced areas.  |
| WB2                   |         | Population served                         | Peak   |         | n    | Maximum population supplied anytime this reporting year.  | Permanent population plus temporary influx (tourists, seasonal workers). Exclude population in non-serviced areas.   |
| <b>Infrastructure</b> |         |   |  |         |      |   |  |
| WB7                   |         | Dams                                      | Number                                       |         | n    | Dams owned by the utility for seasonal water storage as distinct from daily balancing storages for distribution systems.  | Include on-stream and off-stream storages.   |
| WB8                   |         | Dams                                      | Capacity                                     |         | ML   |   |  |
| WB9                   |         | Service reservoirs                        | Number                                       |         | n    | Distribution storage facilities used in the delivery of potable water to customers such as steel or concrete tanks used as daily balancing storages.  | Include clear water tanks at water treatment works.  |
| WB10                  |         | Service reservoirs                        | Capacity                                     |         | ML   |   |  |
| WB11                  |         | Weirs                                     | Number                                       |         | n    | Low barriers, generally within the stream banks, to divert flow to an offtake.  |  |
| WB12                  |         | Weirs                                     | Capacity                                     |         | ML   |   |  |
| WB13                  |         | Bores                                     | Number                                       |         | n    | Bore holes connecting to an aquifer from which water is drawn.  |  |
| WB14                  |         | Bores                                     | Capacity                                     |         | ML/d |   |  |
| WB15                  |         | Pumping stations - potable and nonpotable | Number                                       |         | n    | Pumping stations for headworks and distribution systems.  | Include potable and non-potable pumping stations. Include pumping stations at treatment works that are used to deliver treated water into the distribution system. A pump station may include multiple pumps.  |
| WB16                  |         | Pumping stations - potable and nonpotable | Capacity                                     |         | ML/d |   |  |
| WB17                  | A1      | Treatment works                           | Number                                       |         | n    | Treatment works providing comprehensive water treatment to achieve high quality water.  | Include facilities that remove colour and/or turbidity as well as filtration, disinfection and pH adjustment. Exclude facilities that do not provide filtration and disinfection. Exclude secondary or booster disinfection plants. Exclude fluoridation plants.   |
| WB18                  |         | Treatment works                           | Capacity                                     |         | ML/d |   |  |
| WB20a                 |         | Water mains - potable and nonpotable      | Headworks transfer length                    |         | km   | Trunk mains which are part of the headworks system (eg. dam, river) for delivery of raw water either from scheme to scheme or to treatment works. Bulk suppliers should include trunk mains delivering raw water to other urban centres or schemes. Exclude disused pipe even if maintained for future use.   | Include potable and non-potable mains.   |
| WB20                  | [A2]    | Water mains - potable and nonpotable      | Transfer main length                         |         | km   | A transfer main delivering treated water from a treatment works or service reservoir to a distribution area or other urban centre.  | Include potable and non-potable gravity and rising (pressure) mains. Exclude disused pipe even if maintained for future use.   |
| WB21                  | [A2]    | Water mains - potable and nonpotable      | Reticulation length                          |         | km   | A reticulation main is relatively small pipework distributing supply to a network of customers.   | Include potable and non-potable reticulation. Exclude non-potable reticulation to non-urban areas (eg. for agriculture). Exclude disused pipe even if maintained for future use. Exclude pipework associated with property water services (mains to property meter or service connections). Exclude private mains.   |
| WB22                  | A2      | Water mains - potable and nonpotable      | Total length                                 |         | km   | Sum of (WB20) and (WB21). Excludes (WB20a).   |  |
| WB23                  |         | Renewals - potable and nonpotable         | Mains renewed                                |         | km   | Existing water mains renewed or replaced in the reporting period.   | Exclude maintenance work (refer to Section 5 of NSW Local Government Asset Accounting Manual, 1999). Refer also to page 66 of the NSW Water and Sewerage Strategic Business Planning Guidelines, 2011 ( <a href="http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_nsw_water_sewerage_strategic_planning_guidelines.pdf.aspx">http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_nsw_water_sewerage_strategic_planning_guidelines.pdf.aspx</a> ).   |
| WB24                  |         | Renewals - potable and nonpotable         | Property service connections                 |         | n    | Existing service connections renewed or replaced in the reporting period.   |  |
| WB25                  |         | Renewals - potable and nonpotable         | Customer water meters                        |         | n    | Existing customer water meters renewed or replaced in the reporting period.   |  |
| <b>Connections</b>    |         |   |  |         |      |   |  |
| WB30                  |         | Service connections                       | Service connections                          |         | n    | A service connection is not the same as a connected property. The number of service connections is the number of metered accounts minus the total of any submeters (after master meters eg. to shops or flats) plus the estimated service connections (eg fire connections). The number of service connections includes residential and non-residential and is only used to calculate the Infrastructure Leakage Index and real losses (L / connection / d). For utilities with a dual supply, only the potable service connections should be reported. | The number of metered units and their configuration are not material for determining the number of service connections. Examples: a block of 30 units with a single shared connection is one service connection; a block of 30 units with sub-meters and separate bills for each unit but with a single shared connection to the water main is also one service connection; retirement villages, where there is a single shared connection to the water main that services the whole of the retirement village are also counted as one service connection. |
| WB30a                 |         | Service connections                       | Connections to recycled non-potable supplies |         | n    | The number of accounts for metered and unmetered recycled non-potable supplies. Exclude accounts for non-potable raw water supplies.  | Include connections to wastewater and stormwater recycling systems such as those associated with Water Sensitive Urban Design developments. Exclude connections to non-potable raw water sources (dual supplies). Exclude greywater connections.   |

## Water business data

| NSW No. | NWI No. | Indicator Group                      | Reported Indicator  | 2014/15 | Unit | Indicator Definition   | Instruction   |
|---------|---------|--------------------------------------|---|---------|------|--|---|
| WB31    |         | New connections                      | New residences connected  |         | n    | Number of new residences connected to water supply this reporting year. Excludes vacant subdivided lots. INCLUDES connections resulting from backlog schemes (indicator WB31a).  | Include each individual house, flat, villa, unit, townhouse etc whether separately metered or not.  |
| WB31a   |         | New connections                      | New residences connected - backlog scheme   |         | n    | New residences connected to water supply as a result of connection of a backlog scheme, not residential growth.  | This is a component of indicator WB31.  |
| WB32    | [C2]    | Assessments                          | Residential assessments   |         | n    | Residential assessments for water supply services.   | Include vacant lots.  |
| WB33    | [C3]    | Assessments                          | Non-residential assessments   |         | n    | Non-residential assessments for water supply services.   | Include vacant lots.  |
| WB36    | [C4]    | Assessments                          | Total assessments   |         | n    | Sum of (WB32) and (WB33).  |   |
| WB32a   | [C2]    | Assessments                          | Residential assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION              |         | n    | Residential assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |
| WB33a   | [C3]    | Assessments                          | Non-residential assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION          |         | n    | Non-residential assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |
| WB36a   | [C4]    | Assessments                          | Total assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION                    |         | n    | Total assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |
| WB37    |         | Connected Property Assessment ratios | Connected properties / total assessments  |         | n    | See notes for (WB38).  |   |
| WB37a   |         | Connected Property Assessment ratios | Residential assessments / total assessments                                       |         | n    | See notes for (WB38).  |   |
| WB38    |         | Connected Property Assessment ratios | Connected residential properties / residential assessments                        |         | n    | These ratios do not vary significantly from year to year for water supply systems. NOW has worked with LWUs to establish these ratios and will continue to use the existing ratio shown. If you consider that another ratio is more appropriate, you will need to provide detailed evidence to NOW to support such a change. Evidence that would be required includes the number of residential (single and multi) and non-residential assessments and connected properties from your financial, water and sewerage reports over the last 3 years together with details of vacant lots and new properties connected. Note that ratios are stored as floating decimals but are displayed on this page to two decimal places only. | Connected properties are not the same as assessments. Connected properties rather than assessments are used for consistency with the National Performance Framework. A connected property is one which is connected to the water supply system but which may or may not have a separate assessment. |
| WB32b   | C2      | Connected Properties                 | Residential connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION     |         | n    | Residential connected properties calculated by multiplying ADOPTED residential assessments (WB32a) with the connected residential property - residential assessment ratio (WB38).  | Refer to Appendix H of Benchmarking Report.   |
| WB33b   | C3      | Connected Properties                 | Non-residential connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | n    | Non-residential connected properties calculated by subtracting ADOPTED residential connected properties (WB32b) from ADOPTED connected properties (WB36b).   | Refer to Appendix H of Benchmarking Report.   |
| WB36b   | C4      | Connected Properties                 | Total connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION           |         | n    | Total connected properties calculated by multiplying ADOPTED assessments (WB36a) with the connected property - assessment ratio (WB37).  | Refer to Appendix H of Benchmarking Report.   |
| WB39    |         | Unserved properties and population   | Unserved urban properties   |         | n    | Number of properties in urban zoned land in towns and villages in your utility's area of operations not served by a reticulated public water supply scheme.  | Only applies to properties in urban zoned land. Information on the unserved urban properties and population of each village is available in your LWU's water supply strategic business plan. Exclude vacant lots and rural properties. Exclude premises in land zoned rural residential.            |
| WB40    |         | Unserved properties and population   | Unserved urban population   |         | n    | Estimated permanent population occupying unserved urban properties.  |   |
| WB40a   |         | Unserved properties and population   | Unserved urban population - ADOPTED BY DPI WATER AFTER DATA VALIDATION            |         | n    | Unserved urban population ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |

Water business data

| NSW No.              | NWI No. | Indicator Group        | Reported Indicator  | 2014/15 | Unit | Indicator Definition  | Instruction   |
|----------------------|---------|------------------------|---|---------|------|---|---|
| Water Data (Losses)  |         |                        |   |         |      |   |   |
| WB65                 |         | Water Losses (Potable) | Apparent loss - Unauthorised supply   |         | ML   | Include theft and illegal use (illegal connections, illegal use of unmetered fire connections).   | Exclude firefighting and mains flushing - this is included in unbilled authorised potable supply (indicator WB61). The National Performance Framework default value for unauthorised consumption is 0.1% of total water supplied.   |
| WB66                 |         | Water Losses (Potable) | Apparent loss - Meter inaccuracies  |         | ML   | Under-registration of customer meters and errors in system meters.  | Your utility should have in place a meter testing program and appropriate statistical analysis to determine metering error. Retail meter error defaults are: 2.0% of BACMR (billed authorised consumption, metered residential) or 2.0% of indicator (WB54a) less estimated non-metered supply (Note: an additional sum of 0.5% of BACMR may be added to the residential meter error to account for meter non-registration); 2% of BACMN (billed authorised consumption, metered non-residential) or 2% of indicators (WB62) - (WB54a) less non-metered water supplied. |
| WB67                 |         | Water Losses (Potable) | Total apparent losses   |         | ML   | Apparent losses are the sum of unauthorised potable supply plus meter inaccuracies.   |   |
| WB68                 | [A10]   | Water Losses (Potable) | Real loss - Leakage - Reported by LWU   |         | ML   | Leakage from mains, reservoirs and connections including property service connections to customer meters.   | If leakage is less than 6% of total water supplied, your data should be carefully re-examined as leakage studies have found 6% to be a minimum for leakage for other than bulk water suppliers. Losses of less than 6% should be supported by evidence (eg. waste metering, reservoir drop test or night flow analysis).  |
| WB68a                | [A10]   | Water Losses (Potable) | Real loss - Leakage - ADOPTED BY DPI WATER AFTER DATA VALIDATION                      |         | ML   | Leakage ADOPTED BY DPI WATER after data validation.   | Refer to Appendix H of Benchmarking Report.   |
| WB69                 |         | Water Losses (Potable) | Total potable losses - reported   |         | ML   | Sum of Real losses reported by LWU (WB68) plus Apparent losses (WB67).  | Water losses are only identified for POTABLE water distribution systems.  |
| WB69a                |         | Water Losses (Potable) | Total potable losses - ADOPTED BY DPI WATER AFTER DATA VALIDATION                     |         | ML   | Sum of Real losses ADOPTED BY DPI WATER after data validation (WB68a) plus Apparent losses (WB67).  | Refer to Appendix H of Benchmarking Report.   |
| WB61                 | [W10.1] | Non-revenue water      | Unbilled water  |         | ML   | As entered on the potable supply screen.  |   |
| WB70                 | [W10.1] | Non-revenue water      | Total Potable Losses plus Unbilled Water - reported by LWU                            |         | ML   | Sum of Potable Losses (WB69) and Unbilled Water (WB61).   | Refer to Appendix H of Benchmarking Report.   |
| WB71                 | [W10.1] | Non-revenue water      | Total Potable Losses plus Unbilled Water - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | ML   | Sum of Potable Loss adopted by DPI Water after data validation (WB69a) plus Unbilled Water (WB61).  | Refer to Appendix H of Benchmarking Report.   |
| WB77                 |         | Leakage factors        | Average system pressure   |         | m    | Estimated average operating pressure in the distribution system.  | Pressures should be averaged over 24 hours. For multiple zones report a weighted average using average pressures and the number of connections in each zone.  |
| WB78                 |         | Leakage factors        | Average length of private pipeline  |         | m    | Estimated average length of property service from the reticulation main to the customer meter.  | Assumed to be zero if the customer meter is normally located at or close to the property boundary. If the customer meter is normally located some distance from the boundary, estimate the average length by randomly sampling an appropriate number of property service connections.   |
| WB74                 |         | Leakage testing        | Leakage test method   |         |      | Select the test used or leave as 'unknown' if no test was carried out.  |   |
| WB75                 |         | Leakage testing        | Year of test  |         | year | Year that latest leakage measurement was carried out or leave as 'unknown' if no test was carried out.  | Enter the final year if testing was undertaken over several years (eg. if 2008 to 2010, enter 2010).  |
| WB76                 |         | Leakage testing        | Result of leakage test  |         | %    | If leakage is less than 6% of total water consumption, this data should be carefully examined as leakage studies have found 6% to be a minimum for leakage for other than bulk water suppliers. Losses of less than 6% should be supported by evidence (eg. waste metering, reservoir drop test, or night flow analysis). |   |
| Water Data (Sourced) |         |                        |   |         |      |   |   |
| WB41                 | [W1]    | Water sourced          | Off-stream dams   |         | ML   | Volume of water abstracted from off-stream dams.  | Measured at the point of abstraction. Include volumes pumped from open channels supplied by these dams.   |
| WB42                 | [W1]    | Water sourced          | On-stream dams  |         | ML   | Volume of water abstracted from on-stream dams.   | Measured at the point of abstraction. Include volumes pumped from open channels fed by these dams. Exclude volumes fed to off-stream dams for storage.  |
| WB43                 | [W1]    | Water sourced          | Run-of-river pumping excluding volumes pumped to dams                                 |         | ML   | Volume of water abstracted from run-of-river pumping.   | Measured at the point of abstraction. Exclude volumes pumped to an off-stream dam or desalination plant.  |
| WB44                 | [W1]    | Water sourced          | River release from Water NSW dams   |         | ML   | Volume of water drawn as a release from a Water NSW dam.  |   |
| WB44a                | W1      | Water sourced          | Total surface water   |         | ML   | Sum of (WB41) + (WB42) + (WB43) + (WB44) + (WB46c).   | Includes surface water desalination.  |
| WB45                 | [W2]    | Water sourced          | Groundwater extraction  |         | ML   | Volume abstracted from groundwater.   | Measured at the point of abstraction, not delivery. Exclude desalinated groundwater. Exclude volumes from artificial recharge by sources counted elsewhere eg. rivers, desalination plants and sewage treatment works (recycling).  |
| WB45a                | W2      | Water sourced          | Total groundwater   |         | ML   | Sum of (WB45) + (WB46b).  | Includes groundwater desalination.  |
| WB46a                | W3.1    | Water sourced          | Marine desalination   |         | ML   | Volume of seawater sourced for desalination. Exclude desalinated surface and groundwater.   |   |



Water business data

| NSW No.                           | NWI No. | Indicator Group               | Reported Indicator                   | 2014/15 | Unit | Indicator Definition  | Instruction   |
|-----------------------------------|---------|-------------------------------|--------------------------------------|---------|------|---|---|
| WB47                              | W4      | Water sourced                 | Recycling                            |         | ML   | Volume of water sourced from recycling. Include residential, industrial, commercial, municipal irrigation and on-site substitution where it replaces potable water. Water for agribusinesses should be included where potable (or untreated water in storage) would normally be used. | Includes water discharged to a waterway for environmental purposes as prescribed by the environmental regulator (WB153). Excludes managed aquifer recharge, both where potable (or untreated water in storage) would normally be used (WB156). Excludes urban stormwater use. This differs from (WB158) where any agricultural or on-site uses are counted. |
| WB174                             | W28.4   | Water sourced                 | Urban stormwater used                |         | ML   | Includes potable and non-potable urban stormwater used by the utility for urban water supply. Excludes stormwater supplied for managed aquifer recharge.  | This is a component of (WB53) (Total sourced water - W7) and Total urban water supplied - W11.  |
| WB48                              |         | Water sourced                 | Total water from utility's sources   |         | ML   | Sum of (WB41) + (WB42) + (WB43) + (WB44) + (WB45) + (WB46a) + (WB47) + (WB174) or NWI Indicators W1+W2+W3.1+W4+W28.4  |   |
| WB49                              | W5.1    | Water sourced                 | Bulk purchase - potable              |         | ML   | Volume of potable water received from a bulk supplier outside your utility's geographic area of responsibility (excludes recycled sewage and urban stormwater).   |   |
| WB50                              | W5.2    | Water sourced                 | Bulk purchase - non-potable          |         | ML   | Volume of non-potable water purchased from a bulk supplier outside your utility's geographic area of responsibility (excludes recycled sewage and urban stormwater).  |   |
| WB52a                             | W6      | Water sourced                 | Bulk purchase - recycled             |         | ML   | Volume of recycled water (potable and non-potable) received from another utility outside your utility's geographic area of responsibility. This is a component of (WB52b).  |   |
| WB52b                             | W5      | Water sourced                 | Total bulk water purchased           |         | ML   | Sum of (WB49) + (WB50) + (WB52a) + (WB172) or NWI Indicator W5 = W5.1+W5.2+W6+W28.2   | Total volume of water (potable or non-potable) received from another utility outside your utility's geographic area of responsibility. Includes water from recycled sewage and urban stormwater received. The volume of water will include water that is subsequently exported to another utility.  |
| WB53                              | W7      | Water sourced                 | Total water sourced                  |         | ML   | Sum of (WB48) + (WB52b) or NWI Indicator W7 = W1+W2+W3.1+W4+W5+W28.4  |   |
| WB51                              |         | Water sourced                 | Potable bulk supplier-supply scheme  |         |      | Select the name of bulk supplier or bulk supply scheme, or leave as 'unknown' if no purchase was made.  | If a bulk supplier or scheme is not included in the pick list, please notify the Manager, Performance Monitoring, DPI Water for rectification (9842 8505).  |
| WB52                              |         | Water sourced                 | Purchase price potable bulk water    |         | c/kL |   |   |
| Water Data (Supplied Non Potable) |         |                               |                                      |         |      |   |   |
| WB63                              | W8.2    | Authorised non-potable supply | Residential                          |         | ML   | Non-potable water reticulated to residential customers.   | Include metered and estimated unmetered supply. Exclude recycled water and urban stormwater.<br><br>See potable water supplied indicator (WB54a) for definition of Residential.   |
| WB63a                             | [W9.2]  | Authorised non-potable supply | Commercial                           |         | ML   | Total metered and estimated non-metered non-potable water supplied to commercial customers. Excludes recycled water and urban stormwater use.   | Include offices, shops, clubs, hotels, motels, mobile home villages, caravan parks (including long stay/holiday parks) etc.   |
| WB63b                             | [W9.2]  | Authorised non-potable supply | Industrial - mining                  |         | ML   | Total metered and estimated non-metered non-potable water supplied to mining industry customers. Excludes recycled water and urban stormwater use.  | For industrial customers within urban zoned land or industrial customers that are supplied with non-potable water outside of urban zoned land.<br><br>See potable water supplied indicator (WB56a) for definition of Mining.  |
| WB63c                             | [W9.2]  | Authorised non-potable supply | Industrial - manufacturing           |         | ML   | Total metered and estimated non-metered non-potable water supplied to manufacturing customers. Excludes recycled water and urban stormwater use.  | For industrial customers within urban zoned land or industrial customers that are supplied with non-potable water outside of urban zoned land.<br><br>See potable water supplied indicator (WB56b) for definition of Manufacturing.   |
| WB63d                             | [W9.2]  | Authorised non-potable supply | Industrial - electricity generation  |         | ML   | Total metered and estimated non-metered non-potable water supplied to electricity generating customers. Excludes recycled water and urban stormwater use.   | For industrial customers within urban zoned land or industrial customers that are supplied with non-potable water outside of urban zoned land.<br><br>See potable water supplied indicator (WB56c) for definition of Industrial - Electricity Generation.   |
| WB63e                             | [W9.2]  | Authorised non-potable supply | Industrial - other                   |         | ML   | Total metered and estimated non-metered non-potable water supplied to other industrial customers. Excludes recycled water and urban stormwater use.   | For industrial customers within urban zoned land or industrial customers that are supplied with non-potable water outside of urban zoned land.<br><br>See potable water supplied indicator (WB56d) for definition of Industrial - Other.  |
| WB63f                             | [W9.2]  | Authorised non-potable supply | Rural                                |         | ML   | Total metered and estimated non-metered non-potable water supplied to farms and hobby farms outside urban zoned land. Exclude recycled and urban stormwater use.  | See potable water supplied indicator (WB57) for definition of Rural.  |
| WB63g                             | [W9.2]  | Authorised non-potable supply | Municipal - (excluding public parks) |         | ML   | Total metered and estimated non-metered non-potable water supplied to municipal customers. Exclude recycled and urban stormwater use.   | See potable water supplied indicator (WB58) for definition of Municipal.  |
| WB63h                             | [W9.2]  | Authorised non-potable supply | Municipal - public parks             |         | ML   | Total metered and estimated non-metered potable water supplied for watering public parks and gardens. Exclude recycled and urban stormwater use.  | See potable water supplied indicator (WB60) for definition of Municipal - Public Parks.   |
| WB63i                             | W9.2    | Authorised non-potable supply | Total non-residential                |         | ML   | Sum of (WB63a) + (WB63b) + (WB63c) + (WB63d) + (WB63e) + (WB63f) + (WB63g) + (WB63h).   |   |
| WB63j                             | W14.2   | Authorised non-potable supply | Bulk water exports                   |         | ML   | Total volume of water (non-potable) supplied to other utilities or entities outside your utility's geographic area of responsibility. Exclude recycled water and urban stormwater use.  |   |
| WB63k                             | W10.2   | Authorised non-potable supply | Unbilled                             |         | ML   | Metered and estimated unmetered non-potable authorised supply for which a bill is not issued to the consumer. Exclude recycled and urban stormwater use.  | See potable water supplied indicator (WB61) for definition of Unbilled.   |
| WB63l                             | W10.3   | Authorised non-potable supply | Managed aquifer recharge             |         | ML   | Non-potable water supplied to managed aquifer recharge. Excludes recycled water and urban stormwater use.   |   |
| WB63m                             | W10.4   | Authorised non-potable supply | Agricultural irrigation              |         | ML   | Non-potable water supplied to agricultural irrigation. Excludes recycled water and urban stormwater use.  |   |

## Water business data

| NSW No.                              | NWI No. | Indicator Group               | Reported Indicator                                       | 2014/15 | Unit | Indicator Definition  | Instruction   |
|--------------------------------------|---------|-------------------------------|--|---------|------|---|---|
| WB64                                 | W11.2   | Authorised non-potable supply | Total authorised non-potable supply                      |         | ML   | Sum of (WB63) + (WB63a) + (WB63b) + (WB63c) + (WB63d) + (WB63e) + (WB63f) + (WB63g) + (WB63h) + (WB63k)<br>or NWI Indicator W11.2 = W8.2+W9.2+W10.2   | Include metered and estimated unmetered supply. Exclude recycled water (WB158) and urban stormwater use (WB174).  |
| <b>Water Data (Supplied Potable)</b> |         |                               |  |         |      |   |   |
| WB82                                 |         | Peak water supplied           | Peak day   |         | ML   | The maximum 24 hour potable water supplied in the reporting year.   |   |
| WB83                                 |         | Peak water supplied           | Peak week  |         | ML   | The maximum 7 day potable water supplied in the reporting year.   |   |
| WB54a                                | W8.1    | Authorised potable supply     | Residential  |         | ML   | Total metered and estimated non-metered potable water supplied to residential properties. Excludes recycled water and urban stormwater.   | Include retirement villages. Exclude caravan parks (long term stay/holiday parks) and mobile home villages.   |
| WB54b                                | W8.1    | Authorised potable supply     | Residential - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | ML   | Total metered and estimated non-metered potable water supplied to residential properties ADOPTED BY DPI WATER after data evaluation. Excludes recycled water and urban stormwater.                          | Refer to Appendix H of Benchmarking Report.   |
| WB55                                 | [W9.1]  | Authorised potable supply     | Commercial   |         | ML   | Total metered and estimated non-metered potable water supplied to commercial customers. Excludes recycled water and urban stormwater use.   | Include offices, shops, clubs, hotels, motels, mobile home villages, caravan parks (including long stay/holiday parks) etc.   |
| WB55a                                | [W9.1]  | Authorised potable supply     | Commercial - ADOPTED BY DPI WATER AFTER DATA VALIDATION  |         | ML   | Total metered and estimated non-metered potable water supplied to commercial customers ADOPTED BY DPI WATER after data evaluation. Excludes recycled water and urban stormwater use.                        | Refer to Appendix H of Benchmarking Report.   |
| WB56a                                | [W9.1]  | Authorised potable supply     | Industrial - mining                                      |         | ML   | Total metered and estimated non-metered potable water supplied to mining industry customers. Excludes recycled water and urban stormwater use.  | <p>For industrial customers within urban zoned land or industrial customers that are supplied with potable water outside of urban zoned land.</p> <p>Mining includes customers that mainly extract naturally occurring mineral solids (eg.coal and ores); liquid minerals (eg.crude petroleum); and gases, such as natural gas. The term mining is used in the broad sense to include: underground or open cut mining; dredging; quarrying; well operations or evaporation pans; recovery from ore dumps or tailings as well as beneficiation activities (i.e. preparing, including crushing, screening, washing and flotation) and other preparation work customarily performed at the mine site, or as a part of mining activity.</p> <p>Mining is distinguished by two basic activities: mine operation and mining support activities.</p> <p>Mine operation includes units operating mines, quarries, or oil and gas wells on their own account, or for others on a contract or fee basis, as well as mining sites under development.</p> <p>Mining support activities include units that perform mining services on a contract or fee basis, and exploration (except geophysical surveying).</p> <p>Mining excludes refining or smelting of minerals or ores (other than preliminary smelting of gold), or in the manufacture of such products of mineral origin as coke or cement. These are classified to Manufacturing.</p> |
| WB56b                                | [W9.1]  | Authorised potable supply     | Industrial - manufacturing                               |         | ML   | Total metered and estimated non-metered potable water supplied to manufacturing customers. Excludes recycled water and urban stormwater use.  | <p>For industrial customers within urban zoned land or industrial customers that are supplied with potable water outside of urban zoned land.</p> <p>Manufacturing includes customers mainly engaged in the physical or chemical transformation of materials, substances or components into new products (except agriculture and construction). Manufacturing units are often described as plants, factories or mills and characteristically use power-driven machines and other materials-handling equipment.</p> <p>Assembly of the component parts of manufactured products, either self-produced or purchased from other units, is considered manufacturing. For example, assembly of self-manufactured prefabricated components at a construction site is considered manufacturing, as the assembly is incidental to the manufacturing activity.</p>   |
| WB56c                                | [W9.1]  | Authorised potable supply     | Industrial - electricity generation                      |         | ML   | Total metered and estimated non-metered potable water supplied to electricity generating customers. Excludes recycled water and urban stormwater use.   | For industrial customers within urban zoned land or industrial customers that are supplied with potable water outside of urban zoned land.  |
| WB56d                                | [W9.1]  | Authorised potable supply     | Industrial - other                                       |         | ML   | Total metered and estimated non-metered potable water supplied to other industrial customers (excludes mining, manufacturing and electricity generation). Excludes recycled water and urban stormwater use. | For industrial consumers within urban zoned land or industrial consumers that are supplied with potable water outside of urban zoned land.  |
| WB57                                 | [W9.1]  | Authorised potable supply     | Rural  |         | ML   | Total metered and estimated non-metered potable water supplied to farms and hobby farms outside urban zoned land.   | Include potable water supplied for stock and domestic uses outside of urban zoned land including market gardens, agricultural irrigation. Include metered and estimated unmetered water supplied. Exclude non-potable water supplied.   |
| WB58                                 | [W9.1]  | Authorised potable supply     | Municipal - excluding public parks                       |         | ML   | Total metered and estimated non-metered potable water supplied to municipal customers. Exclude recycled and urban stormwater use.   | Include hospitals, schools, nursing homes, colleges, universities, public pools, gaols etc. Include metered and estimated unmetered water supplied. Exclude public parks.   |
| WB60                                 | [W9.1]  | Authorised potable supply     | Municipal - public parks                                 |         | ML   | Total metered and estimated non-metered potable water supplied for watering public parks and gardens.   | Include potable supply for watering of public parks, gardens and ovals etc. Include metered and estimated unmetered water supplied.   |

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| NSW No.                        | NWI No. | Indicator Group               | Reported Indicator   | 2014/15 | Unit | Indicator Definition   | Instruction   |
|--------------------------------|---------|-------------------------------|--|---------|------|--|---|
| WB60a                          | W9.1    | Authorised potable supply     | Total non-residential  |         | ML   | Sum of (WB55) + (WB56a) + (WB56b) + (WB56c) + (WB56d) + (WB57) + (WB58) + (WB60).  |   |
| WB59                           | W14.1   | Authorised potable supply     | Bulk water exports   |         | ML   | Total volume of water (potable) supplied to other utilities or entities outside your utility's geographic area of responsibility. Exclude recycled water and urban stormwater use.   |   |
| WB61                           | [W10.1] | Authorised potable supply     | Unbilled water   |         | ML   | Volume of unbilled water is the potable water supplied, excluding residential, commercial, municipal and industrial water. Metered and estimated unmetered potable authorised supply for which a bill is not issued to the consumer. | Include firefighting and mains flushing as this is authorised supply and is not a water loss. The National Performance Framework default value for unmetered, unbilled authorised supply is 0.5% of total water supplied. Examples: firefighting (customer fire connections and street hydrants); mains flushing etc. |
| WB62                           | W11.1   | Authorised potable supply     | Total authorised potable supply - Reported                                   |         | ML   | Sum of (WB54a) + (WB55) + (WB56a) + (WB56b) + (WB56c) + (WB56d) + (WB57) + (WB58) + (WB60) + (WB61)<br>or NWI Indicator W11.1 = W8.1+W9.1+ [W10.1]   | Excludes losses, recycled water (WB158), urban stormwater used (WB174) and bulk water exports (WB59).   |
| WB62a                          | W11.1   | Authorised potable supply     | Total authorised potable supply - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | ML   | Total authorised potable supply ADOPTED BY DPI WATER after data validation. Sum of (WB54b) + (WB55a) + (WB56a) + (WB56b) + (WB56c) + (WB56d) + (WB57) + (WB58) + (WB60) + (WB61).  | Refer to Appendix H of Benchmarking Report.   |
| Water Data (Supplied Recycled) |         |                               |  |         |      |  |   |
| WB150                          | W20     | Authorised recycled supply    | Residential  |         | ML   | Recycled water for potable and non-potable town water supply reticulated to residential customers. Excludes urban stormwater use.  | Include metered and estimated unmetered recycled water supplied. Note that recycled water components should now be reported at the sewage treatment works level. These are then aggregated across each of the treatment works and imported into the existing water business indicators for recycled water supplied.   |
| WB151                          | W21     | Authorised recycled supply    | Commercial, Industrial, Municipal  |         | ML   | Recycled water supplied to commercial, industrial, municipal properties. Includes golf courses. Excludes urban stormwater use.   |   |
| WB152                          | W22     | Authorised recycled supply    | Agricultural   |         | ML   | Recycled water supplied for agricultural purposes. Includes irrigation, forestry and livestock. Excludes urban stormwater use.   |   |
| WB153                          | W23     | Authorised recycled supply    | Environmental  |         | ML   | Recycled water supplied for environmental purposes as prescribed by the environmental regulator. Includes discharge to rivers, sea or natural wetlands, provided there is a beneficial use rather than disposal.                     |   |
| WB154                          | W24     | Authorised recycled supply    | On-site  |         | ML   | Recycled water used on-site external to the treatment process.   |   |
| WB155                          | W25     | Authorised recycled supply    | Other  |         | ML   | Recycled water supplied to other users including managed aquifer recharge, firefighting, mains flushing, losses and leakage.   |   |
| WB156                          | W25.1   | Authorised recycled supply    | Managed aquifer recharge   |         | ML   | Recycled water supplied for managed aquifer recharge, excluding environmental water and urban stormwater use.  |   |
| WB157                          | W15     | Authorised recycled supply    | Bulk recycled water exports  |         | ML   | Recycled water supplied to other utilities or entities outside your utility's geographic area of responsibility. Excludes urban stormwater.  |   |
| WB158                          | W26     | Authorised recycled supply    | Total recycled supplied  |         | ML   | Total treated effluent excluding evaporation and urban stormwater use.<br>Sum of (WB150) + (WB151) + (WB152) + (WB153) + (WB154) + (WB155).<br>or NWI Indicator W26 = W20+W21+W22+W23+W24+W25  |   |
| WB158a                         | W26     | Authorised recycled supply    | Total recycled supplied - ADOPTED BY DPI WATER AFTER DATA VALIDATION         |         | ML   | Total recycled supplied ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |
| Demand Management              |         |                               |  |         |      |  |   |
| WB84                           |         | Demand management initiatives | Customer education program   |         | Y/N  |  |   |
| WB85                           |         | Demand management initiatives | Permanent water saving measures  |         | Y/N  | Permanent water saving measures in place to conserve water.  | Example: no hosing of concrete or hard surfaces at any time.  |
| WB86                           |         | Demand management initiatives | Effluent or stormwater use   |         | Y/N  |  |   |
| WB87                           |         | Demand management initiatives | Leakage reduction program  |         | Y/N  |  |   |
| WB88                           |         | Demand management initiatives | Retrofit program   |         | Y/N  |  |   |
| WB89                           |         | Demand management initiatives | Rebates for water efficient appliances                                       |         | Y/N  |  |   |



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| NSW No.        | NWI No. | Indicator Group               | Reported Indicator                     | 2014/15 | Unit | Indicator Definition  | Instruction  |
|----------------|---------|-------------------------------|--|---------|------|---|--|
| WB90           |         | Demand management initiatives | Customer billing interval              |         | mths | Interval between customer bills this reporting year.  |  |
| WB91           |         | Demand management initiatives | Other initiative                       |         |      | Other demand management initiatives the utility has in place, such as 'Water saving tips on Council's website' or 'Member of the Savewater! Alliance'.  | Exclude initiatives that are already mentioned in indicators (WB84) to (WB89) - customer education program, permanent water saving measures, effluent or stormwater use, leakage reduction program, retrofit program, rebates for water efficient appliances.  |
| WB92           |         | Demand management initiatives | Other initiative                       |         |      |   |  |
| WB93           |         | Rainwater tanks               | Rebate for tanks                       |         | Y/N  |   |  |
| WB94           |         | Rainwater tanks               | Maximum rebate available               |         | \$   |   |  |
| WB95           |         | Drought restrictions          | Days water restrictions due to drought |         | days | Include all days of drought water restriction regardless of the level of restriction.   |  |
| Service Levels |         |                               |  |         |      |   |  |
| WB96           | [C10]   | Complaints                    | Service complaints                     |         | n    | Complaints relating to service quality and reliability, including leaks. Exclude water quality complaints and billing complaints. Exclude queries about service quality and reliability and requests for information on efficient water use and 'water saving'.                         | <p>Include bursts, leaks, service interruptions, adequacy of service, water pressure, affordability, behaviour of staff or agents.</p> <p>Exclude complaints about tariff structure. A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Complaints from separate customers arising from the same cause count as separate complaints. Include complaints received by the water utility in person, by mail, by fax, phone, email or text message.</p> <p>Exclude complaints about planned service interruptions unless the customer expresses dissatisfaction about the interruption. Australian Standard AS ISO 10002-2006 refers.</p> <p>Examples: Include complaints about pressure when found to be caused by a leaking mains or when a customer expresses dissatisfaction with the normal pressure.</p> <p>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.</p>                     |
| WB97           |         | Complaints                    | Frequent service complaint 1           |         |      | A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the utility, its employees or contractors.   | Include complaints in person, by mail, email, fax, phone, or text messaging.   |
| WB98           |         | Complaints                    | Frequent service complaint 2           |         |      |   |  |
| WB98a          |         | Complaints                    | Customer contacts/inquiries            |         | n    | A request by a customer for information about a product or service provided by the water utility (eg. 'tips on water saving') that does not indicate customer dissatisfaction. The customer may also call to advise the utility of asset condition (eg. a 'weep' at their water meter). |  |
| WB99           | [C12]   | Complaints                    | Billing complaints                     |         | n    | Complaints concerning account payment, financial loss or overcharging and billing errors. Exclude queries (WB98a).  | <p>Do not include complaints on government pricing policy or complaints about the tariff or queries about how the tariff is calculated. A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Complaints from separate customers arising from the same cause count as separate complaints. Includes complaints received by the water utility in person, by mail, by fax, phone, email or text message.</p> <p>When a customer queries an account, this is not counted as a complaint unless the customer identifies that they have rung to make a complaint. If the customer rings to make an inquiry but remains dissatisfied or the inquiry identifies an error in the bill, this should be recorded as a complaint.</p> <p>If a customer makes repeated contact on the same billing issue this should be recorded as a complaint. If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.</p> |
| WB100          | [C10]   | Complaints                    | Other complaints                       |         | n    | Complaints other than water quality, service or billing. Exclude queries (WB98a).   | <p>A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Complaints from separate customers arising from the same cause count as separate complaints. Include complaints received by the water utility in person, by mail, by fax, phone, email or text message. Exclude complaints on government pricing policy or tariff structures.</p> <p>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.</p>  |

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| NSW No. | NWI No. | Indicator Group                | Reported Indicator   | 2014/15 | Unit | Indicator Definition   | Instruction  |
|---------|---------|--------------------------------|--|---------|------|--|--|
| WB101a  | C9      | Complaints                     | Water quality complaints (bulk supplies)                   |         | n    | Customer complaints concerning the quality of reticulated bulk potable supplies. Exclude queries (WB98a).  | Water quality complaints for areas where your utility did not carry out water treatment (ie. where the supply is obtained from a bulk supplier).<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.  |
| WB101b  | [C9]    | Complaints                     | Water quality complaints (treated supplies)                |         | n    | Complaints relating to water treated by your utility's treatment plants. Exclude queries (WB98a).  | Sum of water quality complaints for your treatment works (entered under Water Treatment/Service Levels NSW indicator number (WT37)).   |
| WB102   | [C13]   | Complaints                     | Total complaints   |         | n    | Sum of (WB96) + (WB99) + (WB100) + (WB101a) + (WB101b).  |  |
| WB103   | C14     | Telephone connect time         | Percent of calls answered by an operator within 30 seconds |         | %    | Percentage of calls answered by an operator within 30 seconds. If a percentage is provided for Sewerage indicator (WB41), do not provide a percentage here.  | If your utility does not record the 'time to connect to telephone' leave this indicator blank. Exclude calls resolved by automated systems, hang-ups or where the customer has selected an incorrect dialing option.<br><br>Examples: if a customer elects to speak with an operator via automatic dialling, the connect time is from the time when the customer was connected by the system until it is answered by an operator. The connect time starts when the call gets connected by person, (in which case the connect time would be zero), by an auto attendant (IVR) or by a message informing the caller they have been put in a queue. The connect time finishes when the caller is answered by a person. If the caller hangs up before they speak to a person, the call is not counted. Similarly, if the caller's question is answered by an IVR, meaning they dont need to speak to an operator, the call is not counted. |
| WB104   | [A8]    | Unplanned supply interruptions | Water main breaks  |         | n    | Total number of water main breaks, bursts and leaks in all diameter water distribution and reticulation mains. Includes potable and non-potable water mains.   | Exclude: Breaks in the property service connection; weeps and seepages in above-ground mains that can be fixed without shutting down the main.   |
| WB105   |         | Unplanned supply interruptions | Property service connection failures                       |         | n    | Unplanned incidents where water is lost due to failure of a property service connection.   | Exclude a burst or leak which causes no discernible impact on customers, property or the environment.  |
| WB106   | [C17]   | Unplanned supply interruptions | Incidence of unplanned interruptions                       |         | n    | Incidence of unplanned interruptions is the number of connected properties affected by a total loss of the potable water supply service due to failure of the water asset. An unplanned interruption is a total loss of water supply due to failure of the water asset.  | An unplanned interruption is when the customer has not received at least 24 hours notification of the interruption. Interruptions include both potable and recycled interruptions. Include each occurrence of interruption. Exclude interruptions caused by burst or leaks in the property service connection and interruptions where there is some reduction to service but where normal activities (eg. shower, washing machine, toilet flushing etc) are still possible.  |
| WB107   | [C15]   | Unplanned supply interruptions | Average duration   |         | min  | <p>The average duration for which a customer is without potable water supply for the reporting period due to an unplanned interruption.</p> <p>A water supply interruption is any event causing a total loss of water supply due to any cause. Interruptions do not include those caused by bursts or leaks in the property service (mains to meter connection) unless the burst or leak requires the mains to be shut down for repair.</p> <p>An unplanned water supply interruption is when the customer has NOT received at least 24 hours notification (or as otherwise prescribed by regulatory requirements) of the interruption. It also includes situations where the duration of a planned interruption exceeds that which was originally notified. In this circumstance the length of the entire interruption is counted. All un-notified interruptions caused by third parties should be included.</p> <p>An interruption commences when the water utility is aware that 'water is no longer available at the customer's first cold water tap and ceases 'when "normal" service is restored'.</p> <p>Where the utility is aware of a water supply interruption through its internal systems alarms, the duration commences when the alarm is raised.</p> <p>If a customer notifies the water utility they are without water, the duration commences at the time of notification. If the water utility is responding to a notification of a broken main, unless this notification also indicates a loss of supply, the duration commences once the break is isolated (if repairs are not being done under pressure).</p> | <p>If the utility responds to notification of a broken main, unless the notification also indicates a loss of supply, duration commences once the break is isolated.</p> <p>Examples - A utility advises customers an interruption will occur and will last 3 hours. The actual duration is 5 hours. The unplanned interruption duration is 5 hours. - A customer calls advising they are without water. The interruption commences at the time of notification. - A customer calls advising of a broken main. Unless the notification also indicates a loss of supply, the interruption commences when staff arrive at the main and isolate the break. - Mains are shut down due to fire fighting requirements. This interruption is included and commences at the time the mains are shut down. Include un-notified interruptions caused by third parties.</p>   |
| Health  |         |                                |  |         |      |  |  |
| WB113   | H6      | Water quality management       | Risk-based drinking water quality plan?                    |         | Y/N  | <p>Minimum requirement for answering 'yes' is a documented water quality management system in accordance with page 2-1 of the Australian Drinking Water Quality Guidelines 2011. Any other more rigorous plans are also satisfactory.</p> <p>Note: Commencing in the 2014-15 financial year, the minimum requirement will be a Drinking Water Quality System in accordance with the 'NSW Guidelines for drinking water systems, NSW Health and NSW Office of Water', 2013 (www.health.nsw.gov.au/publichealth/environment).</p> <p>The Drinking Water Quality System will need to be independently audited in order to comply with the Public Health Act 2010 and to report 'Yes' for 'Externally Assessed - NWI Indicator H5' (WB113a).</p>   |  |
| WB113a  |         | Water quality management       | Specify planning framework                                 |         |      | State the basis for your Drinking Water Management System.   | Examples: NSW Guidelines for Drinking Water Management Systems, 2013; Framework for Management of Drinking Water Quality, HACCP, ISO 9001, WSAA (National Water Quality Framework Continuous Improvement Tool).  |

# Water business data

| NSW No.          | NWI No. | Indicator Group          | Reported Indicator                                      | 2014/15 | Unit | Indicator Definition  | Instruction   |
|------------------|---------|--------------------------|---|---------|------|---|---|
| WB114            | H5      | Water quality management | External assessment of plan                             |         |      | State the basis for the external accreditation.   | For each external assessment, external third party accredited assessments must have taken place within the last 12 months. The scope of these quality systems must cover the entire water business water quality management system. If the quality system covers a more limited area, the indicated quality system must be footnoted with a description of the area covered. Commencing in the 2014-15 financial year, assessments must be independently audited in accordance with NSW Guidelines for Drinking Water Management Systems, 2013.   |
| WB114a           |         | Water quality management | Water Supply distribution system integrity examination? |         | Y/N  | Did your LWU carry out a detailed examination of the integrity of your water supply distribution systems in accordance with Circular LWU 18 of 4 June 2014 in this financial year? Note that a detailed examination is required at least every 4 years (or more frequently if warranted by your LWU's risk assessment or if the free chlorine residual at the extremities of a distribution system is below 0.2mg/L). | Refer also to Appendix E of 2013-14 NSW Benchmarking Report ( <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> ). LWU Circulars can be accessed in the Trade Waste section of the NSW Performance Monitoring Database.  |
| WB114b           |         | Water quality management | Summary of Distribution System Deficiencies identified  |         |      | Examples of deficiencies are shown in the Instructions. Indicate the name of the distribution system in each case.  | Examples: (1) Mesh openings are too large or the reservoir roof design is deficient, allowing entry of small birds, vermin, rain water and windblown material to contaminate the stored water. The roof design and/or the mesh must be modified to rectify. - refer to page 10 of the 2013-14 NSW Benchmarking Report ( <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> ). (2) Rain can enter the reservoir from the roof drainage system or a leaking reservoir roof, holes in the reservoir wall or gaps around the openings on the roof – rectify. (3) Inspection hatches not closed and locked at all times or the reservoir site and roof are not secured from unauthorised access – rectify. Refer also to Appendix E of 2013-14 NSW Benchmarking Report ( <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> ). |
| WB114c           |         | Water quality management | Distribution System Deficiencies Rectified?             |         | Y/N  | Indicate the name of the distribution system in each case in Indicator (WB114b).  | Any deficiencies in distribution system integrity identified in Indicator 114b should be rectified as a matter of priority in accordance with Circular LWU 18 of 4 June 2014.   |
| WB114d           |         | Water quality management | Provided summary report to DPI Water?                   |         | Y/N  | Summary Report provided to DPI Water following investigation of the integrity of each water supply distribution system?   |   |
| WB115            |         | Public health incidents  | Category 1 incidents                                    |         | n    | Incidents with nil or inconsequential public health effects.  | Example: a minor failure of a water treatment process or asset that results in a limited boil water alert. Examples of Category 1, 2 or 3 Public Health and/or Environmental Incidents are shown on page 237 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report ( <a href="http://www.water.nsw.gov.au/_data/assets/pdf_file/0006/562758/nsw_water_supply_and_sewerage_benchmarking_report_2013_14.pdf">http://www.water.nsw.gov.au/_data/assets/pdf_file/0006/562758/nsw_water_supply_and_sewerage_benchmarking_report_2013_14.pdf</a> ).  |
| WB116            |         | Public health incidents  | Category 2 incidents                                    |         | n    | Incidents with a limited public health impact.  | Examples: non-compliance with health parameters (E. coli) of ADWG, 2011 for more than 7 days; system-wide boil water notice; failure of a disinfection system of more than 3 days; failure of a major treatment process or asset at a treatment works of more than 4 days; chlorine or ammonia gas leak (chlorination/chloramination); non-pathogenic/toxic contamination of the potable water supply due to a cross connection; an incident resulting in unplanned interruptions to supply of more than 2 days (if more than 7 days report as Category 3).   |
| WB117            |         | Public health incidents  | Category 3 incidents                                    |         | n    | Incidents with a major impact on public health.   | Examples: outbreak of water borne disease and/or hospitalisation from water supplied by your utility's water supply system; an incident resulting in unplanned interruptions to supply of more than 7 days; pathogenic contamination of the potable water supply due to a cross connection; toxic contamination of water supply.  |
| WB118            |         | Public health incidents  | Category 3 incidents - detail                           |         |      |   |   |
| WB119            |         | Public health investment | Capital investment to improve health performance        |         | \$k  | Capital expenditure with the principal outcome of improved health performance.  | This indicator highlights public health improvement and innovation. Include expenditure undertaken for compliance purposes having IMPROVED performance as an outcome. Include new treatment works. Exclude renewals. (Enter \$111,500 as 111.5, \$3,999,000 as 3999 etc).   |
| <b>Workforce</b> |         |                          |   |         |      |   |   |
| WB120            |         | Workforce and training   | Total workforce in water business                       |         | FTE  | A full-time employee has an FTE of 1. Part-time and casual employees will have an FTE of less than one based on hours employed.   | Include water supply business workforce engaged in operation, maintenance and management including billing as well as contracted staff. Exclude staff engaged on design and construction.   |
| WB121            |         | Workforce and training   | Female workforce  |         | FTE  |   |   |
| WB122            |         | Workforce and training   | Workforce receiving 2 or more training days             |         | FTE  | The training days FTE of water supply business employees that have undertaken at least 2 days of training in the reporting year. This number will be less than or equal to the workforce FTE.   | The training days FTE of a casual or part-time employee is the FTE of that employee multiplied by the number of days that employee trained in the reporting year.   |
| WB123            |         | Days lost                | Total days lost   |         | FTE  | Total FTE days lost for water supply business.  | Include days lost due to workplace injury, sick leave and industrial action. Exclude recreation leave, long-service leave, public holidays, rostered days off or flexi-leave, maternity leave, jury duty, leave for Army Reserve training, etc. Exclude days lost for staff engaged in design or  |
| WB124            |         | Days lost                | Confirmed injuries                                      |         | n    | Include water supply business injuries that resulted in a fatality, permanent disability or time lost from work of one day or more. Include injuries for equivalent contractor employees. Exclude injuries for employees engaged in design or construction.   |   |
| WB125            |         | Days lost                | Days lost due to injury                                 |         | FTE  | Total FTE days lost due to injury.  | Include days lost for injuries for equivalent contractor employees. Exclude days lost for injuries for employees engaged in design or construction.   |
| WB128            |         | Workforce outsourced     | Management costs outsourced                             |         | %    | The percentages expended by the water supply business on outsourcing of management, operational and maintenance costs.  |   |
| WB129            |         | Workforce outsourced     | Operational costs outsourced                            |         | %    |   |   |
| WB130            |         | Workforce outsourced     | Maintenance costs outsourced                            |         | %    |   | Outsourcing is subcontracting part of the operation and/or management of a utility's business to a third party, where the subcontractor undertakes work that would normally be done by the utility's workforce. Include legal work, electrical maintenance, operation of a treatment works etc.   |



Water business data

| NSW No.                     | NWI No. | Indicator Group                    | Reported Indicator  | 2014/15 | Unit     | Indicator Definition  | Instruction  |
|-----------------------------|---------|------------------------------------|---|---------|----------|---|--|
| Expenses, Charges And Bills |         |                                    |   |         |          |   |  |
| WB131                       |         | Community                          | Reduction in fees and charges to community organisations  |         | \$k      | The value of reductions in fees or charges permitted by legislation which are provided by your water supply business to the community. Exclude pensioner rebates.   | Utilities may elect to provide reduced fees and charges for certain non-profit and community organisations and charities (including non-rateable properties) as permitted by legislation. This indicator reports the total amount of reductions provided to such community organisations in comparison with the standard fees and charges for non-residential customers.   |
| WB131a                      |         | Community                          | Progress towards implementing the National Guidelines for Residential Customers' Water Accounts |         | %        | Estimate your utility's percent progress towards implementing the National Guidelines for Residential Customers' Water Accounts, 2006 (available at <a href="http://www.environment.gov.au">www.environment.gov.au</a> ).   |  |
| WB132a                      | C18     | Community                          | Restrictions for non-payment of water bill  |         | n        | Restrictions and disconnections applied for non-payment of water bills in the reporting period.   | Include: all cases where restriction devices are fitted to reduce water flows to a customer (residential and non-residential). Multiple restrictions for one customer are to be counted as separate restrictions. Exclude: customers who choose to disconnect from the water supply; disconnections carried out due to unsafe infrastructure connected to the water utility's system; instances where your utility elects not to restrict supply due to non-payment. |
| WB132b                      | C19     | Community                          | Legal action for non-payment of water bill  |         | n        | Legal actions for non-payment of water bills in the reporting period.   | Legal action commences from issue of summons. Include action taken against both residential and non-residential customers. Multiple actions against one customer are to be counted as separate actions. Exclude cases where your utility threatens to take legal action but does not   |
| WB133                       |         | Operation and Maintenance expenses | Headworks   |         | %        | Financial data is provided by your utility in Special Schedule No.3 to the Annual Financial Statements, specifically 'Operation and Maintenance Expenses'. Divide this total into 'headworks' and 'distribution and reticulation'.  | Headworks and reticulation OMA are percentages estimated from your operations over the last year. Special Schedule 3 can be used to estimate this by assigning part or all of each OMA expense to either headworks or reticulation.  |
| WB134                       |         | Operation and Maintenance expenses | Distribution and reticulation   |         | %        |   | See (WB133).   |
| WB135                       |         | Developer charges                  | Typical developer charge for this reporting year  |         | \$       | This is the typical developer charge determined by your utility to recover part of the cost of water supply infrastructure for new development.   |  |
| WB136                       |         | Developer charges                  | Typical developer charge for next reporting year  |         | \$       |   |  |
| Environment                 |         |                                    |   |         |          |   |  |
| WB137                       |         | Environmental incidents            | Category 1 incidents  |         | n        | Incidents with little or no impact on the environment.  | Examples: a reportable incident but not a breach of environmental regulations; an incident resulting in under 4 days of odour or noise complaints; a minor spillage of non-toxic chemicals or sludge to waterway or land.  |
| WB138                       |         | Environmental incidents            | Category 2 incidents  |         | n        | Incidents with limited and non-permanent impact on the environment.   | Examples: a minor breach of environmental regulations eg. non maintenance of the required environmental flows, an incident resulting in over 4 days of odour or noise complaints, a major soil erosion incident requiring remediation, a significant chemical or sludge spill to waterway or land.   |
| WB139                       |         | Environmental incidents            | Category 3 incidents  |         | n        | Incidents with major and irreversible impact on the environment.  | Examples: a major breach of environmental regulations, a dam failure, a severe algal outbreak in storages/waterways, a major toxic chemical or sludge spill into waterways, widespread destruction of native forests/ecosystems.   |
| WB140                       |         | Environmental incidents            | Category 3 incidents detail   |         |          |   |  |
| WB141                       |         | Environmental management           | Environmental management plan?  |         | Y/N      |   |  |
| WB142                       |         | Environmental management           | Plan developed in consultation with other bodies including Catchment Management                 |         | Y/N      |   |  |
| WB143                       |         | Environmental management           | Environmental consultative process in place   |         | Y/N      |   |  |
| WB144                       |         | Environmental management           | Capital investment to improve environmental performance   |         | \$k      | Capital expenditure with the principal outcome of improved environmental performance.   | This indicator highlights environmental improvement and innovation. Include expenditure undertaken for compliance purposes having IMPROVED performance as an outcome. Include new treatment works. Exclude renewals. (Enter \$111,500 as 111.5, \$3,999,000 as 3999 etc).  |
| WB144a                      | W13     | Environmental flows supplied       | Environmental flows   |         | ML       | Wholesale flow allocations to the environment, generally upstream of the master meter, as specified in the environmental flow management regime as required by the environmental regulator. Exclude unplanned releases unless these can be incorporated into the environmental flow regime. |  |
| WB145                       |         | Energy                             | Non-renewable energy  |         | MWh      | Energy derived from non-renewable sources used by your water supply business.   |  |
| WB146                       |         | Energy                             | Renewable energy  |         | MWh      | Energy derived from accredited renewable sources used by your water supply business.  |  |
| WB147                       |         | Energy                             | Total energy  |         | MWh      | Sum of (WB145) + (WB146).   |  |
| WB148a                      | E9      | Greenhouse gas emissions - water   | Operating emissions   |         | t CO2 eq | Greenhouse gas emissions for all operations relating to water supply.   | The Greenhouse Gas calculator provided to you by DPI Water will simplify this task (copy available in Appendix G on page 332 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report).  |

# Water business data

| NSW No.                                  | NWI No. | Indicator Group                  | Reported Indicator  | 2014/15 | Unit     | Indicator Definition  | Instruction   |
|--|---------|----------------------------------|---|---------|----------|---|---|
| WB148b                                   | E11     | Greenhouse gas emissions - water | Net administrative emissions  |         | t CO2 eq | Net greenhouse gas emissions for other water supply activities (transport, office buildings and sequestration).   | See (WB148a).   |
| <b>Integrated Water Cycle Management</b> |         |                                  |   |         |          |   |   |
| WB94a                                    |         | Rainwater tanks                  | Number of residential rainwater tanks                               |         | No.      | Total number of residential rainwater tanks in your area used as a supplementary water supply for serving urban areas (towns and villages) serviced by your water utility.  | Excludes commercial, industrial and municipal premises. Excludes reticulated urban stormwater use and greywater collection tanks. Excludes rainwater tanks used for stormwater attenuation.   |
| WB94b                                    |         | Rainwater tanks                  | Typical rainwater tank volume                                       |         | kL       | Typical volume of residential rainwater tanks in your area (WB94a).   |   |
| WB94c                                    |         | Rainwater tanks                  | Total volume of rainwater tanks - Commercial                        |         | kL       | Total volume of rainwater tanks for commercial premises in your area.   |   |
| WB94d                                    |         | Rainwater tanks                  | Total volume of rainwater tanks - Industrial                        |         | kL       | Total volume of rainwater tanks for industrial premises in your area.   |   |
| WB94e                                    |         | Rainwater tanks                  | Number of rainwater tanks used for stormwater attenuation           |         | No.      | Total number rainwater tanks where 'emptiness' is provided for stormwater attenuation.  | Eg. tanks remain empty, or not more than say 50% full in order to provide capacity for stormwater attenuation. Excludes reticulated urban stormwater use.   |
| WB94f                                    |         | Rainwater tanks                  | Percentage of rainwater tank 'emptiness' for stormwater attenuation |         | %        | Typical percentage of rainwater tank 'emptiness' for stormwater attenuation for the rainwater tanks in (WB94c).   |   |
| WB95a                                    |         | Water Sensitive Urban Design     | WSUD implementation – new lots – residential                        |         | No.      | Total number of lots in new residential subdivisions where Water Sensitive Urban Design (WSUD) has been implemented by your Council.  | Includes WSUD implementation of stormwater filtration devices (bio-retention gardens, sediment basins, rain gardens, sand filters, swales, wetlands, infiltration trenches, porous paving), urban stormwater harvesting and use, ponds, stormwater outlet protection, buffer strips, dispersal trenches, urban creek design with habitat value, planting of natural vegetation, impervious area minimisation, and rainwater tanks for public parks and gardens. |
| WB95b                                    |         | Water Sensitive Urban Design     | WSUD implementation – new lots – commercial                         |         | No.      | Total number of lots in new commercial subdivisions where Water Sensitive Urban Design (WSUD) has been implemented by your Council.   | See (WB95a). Includes car parks.  |
| WB95c                                    |         | Water Sensitive Urban Design     | WSUD implementation – new lots – industrial                         |         | No.      | Total number of lots in new industrial subdivisions where Water Sensitive Urban Design (WSUD) has been implemented by your Council.   | See (WB95a). Includes car parks.  |
| WB95d                                    |         | Water Sensitive Urban Design     | WSUD implementation – existing lots – residential                   |         | No.      | Total number of lots in existing residential development areas where Water Sensitive Urban Design (WSUD) has been implemented retrospectively.  | See (WB95a) for information on WSUD implementation.   |
| WB95e                                    |         | Water Sensitive Urban Design     | WSUD implementation – existing lots – commercial                    |         | No.      | Total number of lots in existing commercial development areas where Water Sensitive Urban Design (WSUD) has been implemented retrospectively.   | See (WB95a). Includes car parks.  |
| WB95f                                    |         | Water Sensitive Urban Design     | WSUD implementation – existing lots – industrial                    |         | No.      | Total number of lots in existing industrial development areas where Water Sensitive Urban Design (WSUD) has been implemented retrospectively.   | See (WB95a). Includes car parks.  |
| WB95g                                    |         | Water Sensitive Urban Design     | Stormwater channels managed under WSUD principles                   |         | km       | Total length of urban creeks and trunk stormwater drainage channels within the stormwater catchment that are managed under 'liveable towns and cities' or Water Sensitive Urban Design (WSUD) principles. See (WB95a) for information on WSUD implementation. | Includes urban creeks and trunk stormwater drainage channels within the stormwater catchment upstream of the stormwater discharge point. The stormwater discharge point includes discharge points into watercourses and marine water bodies and points where stormwater is exported to another stormwater drainage system operator.   |
| WB95h                                    |         | Water Sensitive Urban Design     | Development Control Plan for WSUD?                                  |         | Y/N      | Does your Council have a Regional Development Control Plan which requires 'liveable towns and cities' development or Water Sensitive Urban Design (WSUD) for new developments?  | See (WB95a) for information on WSUD implementation.   |
| WB95i                                    |         | Water Sensitive Urban Design     | Development Control Plan details                                    |         | -        | If 'Yes' was answered for 95h, provide the name, date and web link of the Development Control Plan.   |   |
| WB95j                                    |         | Water Sensitive Urban Design     | Stormwater Harvesting   |         | Y/N      | Does your Council have infrastructure in place for urban stormwater harvesting? Uses may include irrigation of sports fields and parks, agriculture or industrial uses.   | Excludes stormwater supplied for managed aquifer recharge.  |
| WB95k                                    |         | Water Sensitive Urban Design     | Price for urban stormwater use                                      |         | c/kL     | Price (c/kL) for urban stormwater use in your utility's area.   | Guidance on suitable water pricing for urban stormwater use is available in the NWI Pricing Principles (2010) [ <a href="http://www.environment.gov.au/water/publications/action/nwi-pricing-principles.html">http://www.environment.gov.au/water/publications/action/nwi-pricing-principles.html</a> ].  |
| WB95l                                    |         | Water Sensitive Urban Design     | Annual budget for maintaining WSUD systems                          |         | \$       |   |   |
| WB95m                                    |         | Water Sensitive Urban Design     | Are your WSUD systems maintained at the required frequency?         |         | Y/N      | The required frequency may have been determined at the project design phase, or is determined as the frequency required for proper functioning of the WSUD system.  |   |
| WB95n                                    |         | Water Sensitive Urban Design     | No. of staff (FTE) maintaining your WSUD systems                    |         | No.      |   |   |
| WB95o                                    |         | Water Sensitive Urban Design     | What is your annual stormwater levy per assessment?                 |         | \$       |   |   |

Water treatment data

| NSW No.           | NWI No. | Indicator Group  | Reported Indicator              | 2014/15 | Unit   | Indicator Definition  | Instruction   |
|-------------------|---------|------------------|---------------------------------|---------|--------|---|---|
| Works Parameters  |         |                  |                                 |         |        |   |   |
| WT1               |         | Works parameters | Year commissioned - augmented   |         | year   | Year of commissioning or latest major augmentation.   |   |
| WT2               |         | Works parameters | Design capacity                 |         | ML/d   |   |   |
| WT3               |         | Works parameters | Type of works                   |         |        | For multiple processes, hold the 'Control' key and select the processes used.   |   |
| WT5               |         | Works parameters | Percentage of population served |         | %      | Estimated percent of your utility's permanent population supplied by this treatment works.  |   |
| WT4               |         | Works parameters | Comments                        |         |        |   |   |
| WT6               |         | Volume treated   | Volume treated                  |         | ML     | Volume treated by this treatment works this reporting year.   |   |
| WT31              |         | Chemical usage   | Alum                            |         | tonnes | For this treatment works only.  |   |
| WT32              |         | Chemical usage   | Alkali                          |         | tonnes | For this treatment works only.  |   |
| WT33              |         | Chemical usage   | Chlorine                        |         | tonnes | For this treatment works only.  |   |
| WT34              |         | Chemical usage   | Fluoride                        |         | tonnes | For this treatment works only.  |   |
| Operator Training |         |                  |                                 |         |        |   |   |
| WT7i              |         | Qualifications   | Operator 1 name                 |         |        | The name of the operator.   | This information is needed in view of the National Certification of Water Treatment Operators being developed by the National Water Commission ( <a href="http://nwc.gov.au/__data/assets/pdf_file/0019/25345/Proposed-National-Certification-Framework.pdf">http://nwc.gov.au/__data/assets/pdf_file/0019/25345/Proposed-National-Certification-Framework.pdf</a> ). |
| WT7a              |         | Qualifications   | Operator 1 qualification        |         |        | Highest qualification obtained by this operator. Qualification level ie. Cert III in Water Industry Operations (Water Treatment Operator) issued by NSW TAFE; Office of Water Certificate Part 2 (Water Treatment Operator) or Certificate Part 1 (Chemical Dosing Systems) issued by the NSW Office of Water; Certificate IV, III, II or I from NSW TAFE; Certificate IV, III, II or I by OTHER RTO.   |   |
| WT7e              |         | Qualifications   | Year of qualification or update |         | year   | Year qualification obtained or updated.   |   |
| WT7j              |         | Qualifications   | Operator 1 qualification level  |         |        | Qualification level obtained by this operator. A – Office of Water Certificate Part 1 (Chemical Dosing Systems) and Certificate Part 2 (Water Treatment Operator) or another Acceptable* Certificate III qualification; B – Office of Water Certificate Part 1 (Chemical Dosing Systems) and a supplementary chlorination safety training course or an Acceptable** Certificate II qualification; C – Operator in training.<br><br>* Such a certificate must include at least 9 of the 11 Units offered in the Water Treatment Operator Course on the Office of Water's website (page 6 of NOW Training Booklet – <a href="http://www.water.nsw.gov.au/ArticleDocuments/36/water_industry_training_non_metro_nsw.pdf.aspx">http://www.water.nsw.gov.au/ArticleDocuments/36/water_industry_training_non_metro_nsw.pdf.aspx</a> ).<br><br>** Such a certificate must include relevant chemical dosing subjects and a supplementary chlorination safety training course. |   |
| WT7k              |         | Qualifications   | Operator 2 name                 |         |        | The name of the operator.   | See (WT7i).   |
| WT7b              |         | Qualifications   | Operator 2 qualification        |         |        | Highest qualification obtained by this operator. See (WT7a).  | See (WT7a).   |
| WT7f              |         | Qualifications   | Year of qualification or update |         | year   | Year qualification obtained or updated.   |   |
| WT7l              |         | Qualifications   | Operator 2 qualification level  |         |        | Qualification level obtained by this operator. See (WT7j).  |   |
| WT7m              |         | Qualifications   | Operator 3 name                 |         |        | The name of the operator.   | See (WT7i).   |
| WT7c              |         | Qualifications   | Operator 3 qualification        |         |        | Highest qualification obtained by this operator. See (WT7a).  |   |
| WT7g              |         | Qualifications   | Year of qualification or update |         | year   | Year qualification obtained or updated.   |   |
| WT7n              |         | Qualifications   | Operator 3 qualification level  |         |        | Qualification level obtained by this operator. See (WT7j).  |   |
| WT7o              |         | Qualifications   | Operator 4 name                 |         |        | The name of the operator.   | See (WT7i).   |
| WT7d              |         | Qualifications   | Operator 4 qualification        |         |        | Highest qualification obtained by this operator. See (WT7a).  |   |
| WT7h              |         | Qualifications   | Year of qualification or update |         | year   | Year qualification obtained or updated.   |   |
| WT7p              |         | Qualifications   | Operator 4 qualification level  |         |        | Qualification level obtained by this operator. See (WT7j).  |   |



Water treatment data

| NSW No.          | NWI No. | Indicator Group | Reported Indicator                     | 2014/15 | Unit | Indicator Definition   | Instruction   |
|------------------|---------|-----------------|--|---------|------|--|---|
| Sampling Results |         |                 |  |         |      |  |   |
| WT26             |         | E.coli          | Number of system samples               |         | n    | Include samples taken at this treatment works for system performance monitoring. Exclude samples for operational monitoring.   | <p>System performance monitoring is a wide ranging assessment of the quality of the water supplied to customers. Operational monitoring is used as a trigger for immediate corrective action to improve water quality and to check equipment is working properly. Sampling location and frequency should be scheduled sampling on the basis of page 235 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report and ADWG 2011.</p> <p>The number of samples reported should be those taken for system performance monitoring from representative locations in the water supply system and not those taken for operational monitoring.</p> <p>In the reporting up to and including 2011-12, the reporting of additional samples to those reported in the NSW Health Drinking Water Quality Program has been accepted for those LWUs that have confirmed that they have undertaken additional sampling to that required by the Drinking Water Program.</p> <p>Commencing in the 2012-13 financial year, the reported results are restricted to those tested by NSW Health or by a NATA accredited laboratory. [Refer also to the final sentence of Note 4 on page 288 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report (<a href="http://www.water.nsw.gov.au/__data/assets/pdf_file/0006/562758/nsw_water_supply_and_sewerage_benchmarking_report_2013_14.pdf">http://www.water.nsw.gov.au/__data/assets/pdf_file/0006/562758/nsw_water_supply_and_sewerage_benchmarking_report_2013_14.pdf</a>)].</p> |
| WT26a            |         | E.coli          | Number of system samples - DOH results |         | n    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT27             | H2      | E.coli          | Percent complying                      |         | %    | Number of samples taken for system compliance monitoring divided by the total number of such samples. Water quality compliance data for each treatment works will be used to determine NWI indicators H2, H3 and H4. | It is neither physically nor economically feasible to test on an ongoing basis for all substances in a water supply system. Each water supply system will have its own key characteristics. It is therefore common for water utilities to monitor regularly for contaminants such as disinfection by-products whereas a wide range of other non-key characteristics will only be monitored irregularly.   |
| WT27a            | H2      | E.coli          | Percent complying - DOH results        |         | %    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT16             |         | Physical        | Number of system performance samples   |         | n    | Include samples taken at this treatment works for system performance monitoring. Exclude samples for operational monitoring.   | See (WT26).   |
| WT16a            |         | Physical        | Number of system samples - DOH results |         | n    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT17             |         | Physical        | Percent complying                      |         | %    | Number of samples taken for system compliance monitoring divided by the total number of such samples.  | See (WT27).   |
| WT17a            |         | Physical        | Percent complying - DOH results        |         | %    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT18             |         | Chemical        | Number of system samples               |         | n    | Include samples taken at this treatment works for system performance monitoring. Exclude samples for operational monitoring.   | See (WT26).   |
| WT18a            |         | Chemical        | Number of system samples - DOH results |         | n    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT19             | [H4]    | Chemical        | Percent complying                      |         | %    | Number of samples taken for system compliance monitoring divided by the total number of such samples. Water quality compliance data for each treatment works will be used to determine NWI indicators H2, H3 and H4. | See (WT27).   |
| WT19a            | [H4]    | Chemical        | Percent complying - DOH results        |         | %    | *Results from the NSW Health Drinking Water Database for this treatment works.   |   |
| WT22             |         | pH              | Number of system samples               |         | n    | Include samples taken at this treatment works for system performance monitoring. Exclude samples for operational monitoring.   | <p>System performance monitoring is a wide ranging assessment of the quality of the water supplied to customers. Operational monitoring is used as a trigger for immediate corrective action to improve water quality and to check equipment is working properly. Sampling location and frequency should be scheduled sampling on the basis of page 235 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report and ADWG 2011. The number of samples reported should be those taken for system performance monitoring from representative locations in the water supply system and not those taken for operational monitoring.</p> <p>THE RESULTS OF THE SAMPLES TESTED BY YOUR UTILITY SHOULD CONTINUE TO BE INCLUDED.</p>  |
| WT23             |         | pH              | Percent complying                      |         | %    | Number of samples taken for system compliance monitoring divided by the total number of such samples.  | See (WT22).   |

Water treatment data

| NSW No.        | NWI No. | Indicator Group          | Reported Indicator                                | 2014/15 | Unit | Indicator Definition  | Instruction  |
|----------------|---------|--------------------------|---|---------|------|---|--|
| WT8            |         | Colour                   | Raw water maximum                                 |         | HU   | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT9            |         | Colour                   | Raw water average                                 |         | HU   | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT10           |         | Colour                   | Treated water maximum                             |         | HU   | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT11           |         | Colour                   | Treated water average                             |         | HU   | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT24           |         | Colour                   | Number of system performance samples              |         | n    | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT25           |         | Colour                   | Percent complying                                 |         | %    | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT12           |         | Turbidity                | Raw water maximum                                 |         | NTU  | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT13           |         | Turbidity                | Raw water average                                 |         | NTU  | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT14           |         | Turbidity                | Treated water maximum                             |         | NTU  | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT15           |         | Turbidity                | Treated water average                             |         | NTU  | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT20           |         | Turbidity                | Number of system performance samples              |         | n    | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT21           |         | Turbidity                | Percent complying                                 |         | %    | For this treatment works only.  | The results of the samples tested by your utility should continue to be included.  |
| WT30           |         | Non-compliance           | Most frequent reason for non-compliance           |         |      |   |  |
| Service Levels |         |                          |   |         |      |   |  |
| WT35           |         | Malfunctions             | Number of days chlorination system failed         |         | days | For this treatment works only.  |  |
| WT36           |         | Malfunctions             | Number of days of major treatment process failure |         | days | For this treatment works only.  |  |
| WT37           | [C9]    | Water quality complaints | Number of complaints                              |         | n    | Include only water quality complaints from customers supplied by this treatment works. Exclude complaints about adequacy and interruptions to supply, water pressure etc. | Include complaints about discolouration, taste, odour, stained washing, illness or cloudy water. Example: complaints about milky water caused by mains flushing. |
| WT38           |         | Water quality complaints | Frequent complaint 1                              |         |      | Most frequent water quality complaint from customers supplied by this treatment works only.   |  |
| WT39           |         | Water quality complaints | Frequent complaint 2                              |         |      |   |  |

Sewerage business data

| NSW No.        | NWI No. | Indicator Group                      | Reported Indicator   | 2014/15 | Unit | Indicator Definition   | Instruction  |
|----------------|---------|--------------------------------------|--|---------|------|--|--|
| Population     |         |                                      |  |         |      |  |  |
| SB1            | C5      | Population served                    | Permanent  |         | n    | Population served with sewerage service in June this reporting year.   | Exclude population in non-serviced areas.  |
| SB2            |         | Population served                    | Peak   |         | n    | Maximum population served anytime this reporting year.   | Permanent population plus temporary influx (tourists, seasonal workers). Exclude population in non-serviced areas.   |
| Infrastructure |         |                                      |  |         |      |  |  |
| SB3            | A4      | Treatment works                      | Number   |         | n    | Include all primary, secondary and tertiary treatment works.   |  |
| SB4            |         | Treatment works                      | Capacity   |         | EP   |  |  |
| SB5            |         | Pumping stations                     | Number   |         | n    |  |  |
| SB6            |         | Pumping stations                     | Capacity   |         | ML/d |  |  |
| SB7            | [A5]    | Sewage mains                         | Gravity (reticulation) length  |         | km   | Length of mains, including trunk and reticulation mains, aqueducts etc. of all diameters.  | Exclude pressure (rising) mains. Exclude property or house connections and conduits carrying treated effluent.   |
| SB8            | [A5]    | Sewage mains                         | Pressure (rising) length   |         | km   | Length of pressure (rising) mains.   |  |
| SB9            | A5      | Sewage mains                         | Total length   |         | km   | Sum of (SB7) + (SB8).  |  |
| SB10           |         | Renewals                             | Mains renewed or replaced in reporting year                              |         | km   |  | Include existing mains renewed or replaced in the reporting year. Exclude maintenance work (Sect 5 of NSW Local Government Asset Accounting Manual, 1999). Refer also to page 66 of the NSW Water and Sewerage Strategic Business Planning Guidelines, 2011 ( <a href="http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_nsw_water_sewerage_strategic_planning_guidelines.pdf.aspx">http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_nsw_water_sewerage_strategic_planning_guidelines.pdf.aspx</a> ). |
| SB11           |         | Renewals                             | Property connections renewed or replaced in reporting year               |         | n    | A house or property connection is a short sewer owned and operated by your utility which connects the main sewer and the customer sanitary drain.  |  |
| Connections    |         |                                      |  |         |      |  |  |
| SB12           |         | New connections                      | New residences connected   |         | n    | Number of new residences connected to sewerage this reporting year. INCLUDES connections resulting from backlog schemes (indicator SB12a).   | Include each individual flat, villa, unit, townhouse etc. whether separately metered or not.   |
| SB12a          |         | New connections                      | New residences connected - backlog scheme                                |         | n    | New residences connected to sewerage as a result of connection of a backlog scheme, not residential growth.  | This is a component of indicator (SB12).   |
| SB13           | [C6]    | Assessments                          | Residential  |         | n    | Residential assessments for sewerage services. Include vacant lots.  |  |
| SB14           | [C7]    | Assessments                          | Non-residential  |         | n    | Non-residential assessments for sewerage services. Include vacant lots.  |  |
| SB17           | [C8]    | Assessments                          | Total assessments  |         | n    | Sum of (SB13) + (SB14).  |  |
| SB13a          | [C6]    | Assessments                          | Residential assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION     |         | n    | Residential assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.  |
| SB14a          | [C7]    | Assessments                          | Non-residential assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | n    | Non-residential assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.  |
| SB17a          | [C8]    | Assessments                          | Total assessments - ADOPTED BY DPI WATER AFTER DATA VALIDATION           |         | n    | Total assessments ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.  |
| SB18           | [C8]    | Connected Property Assessment ratios | Connected properties / total assessments                                 |         | n    | See notes for (SB19).  |  |
| SB18a          | [C6]    | Connected Property Assessment ratios | Residential assessments / total assessments                              |         | n    | See notes for (SB19).  |  |
| SB19           | [C6]    | Connected Property Assessment ratios | Connected residential properties / residential assessments               |         | n    | These ratios do not vary significantly from year to year for sewerage systems. NOW has worked with LWUs to establish these ratios and will continue to use the existing ratio shown. If you consider that another ratio is more appropriate, you will need to provide detailed evidence to NOW to support such a change. Evidence that would be required includes the number of residential (single and multi) and non-residential assessments and connected properties from your financial, water and sewerage reports over the last 3 years together with details of vacant lots and new properties connected. Note that ratios are stored as floating decimals but are displayed on this page to two decimal places only. | Connected properties are not the same as assessments. Connected properties rather than assessments are used for consistency with the National Performance Framework. A connected property is one which is connected to the sewerage system but which may or may not have a separate assessment.  |



Sewerage business data

| NSW No.        | NWI No. | Indicator Group            | Reported Indicator  | 2014/15 | Unit | Indicator Definition   | Instruction   |
|----------------|---------|----------------------------|---|---------|------|--|---|
| SB13b          | C6      | Connected Properties       | Residential connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION     |         | n    | Residential connected properties calculated by multiplying ADOPTED residential assessments (SB13a) with the connected residential properties - residential assessment ratio (SB19).  | Refer to Appendix H of Benchmarking Report.   |
| SB14b          | C7      | Connected Properties       | Non-residential connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION |         | n    | Non-residential connected properties calculated by subtracting ADOPTED residential connected properties (SB13b) from ADOPTED total connected properties (SB17b).   | Refer to Appendix H of Benchmarking Report.   |
| SB17b          | C8      | Connected Properties       | Total connected properties - ADOPTED BY DPI WATER AFTER DATA VALIDATION           |         | n    | Total connected properties calculated by multiplying ADOPTED total assessments (SB17a) with the connected property - total assessment ratio (SB18).  | Refer to Appendix H of Benchmarking Report.   |
| SB20           |         | Unserved in reporting year | Unserved urban properties   |         | n    | Number of properties in urban zoned land in towns and villages in your utility's area of operations that are not served by a reticulated public sewerage service.  | Exclude premises in land zoned rural residential. Information on the unserved urban properties and population of each village is available in your LWU's sewerage strategic business plan.  |
| SB21           |         | Unserved in reporting year | Unserved urban population   |         | n    | Estimated permanent population in unserved urban properties.   |   |
| SB21a          |         | Unserved in reporting year | Unserved urban population - ADOPTED BY DPI WATER AFTER DATA VALIDATION            |         | n    | Unserved urban population ADOPTED BY DPI WATER after data validation.  | Refer to Appendix H of Benchmarking Report.   |
| Service Levels |         |                            |   |         |      |  |   |
| SB34           | [C11]   | Complaints                 | Sewage chokes   |         | n    | Complaints relating to sewage chokes. Exclude odour, billing and sewerage service complaints. Exclude queries.   | Exclude complaints relating to property connections.<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.   |
| SB38           | [C11]   | Complaints                 | Service   |         | n    | Complaints other than chokes, odour or billing. Exclude queries.   | Include complaints concerning sewerage system reliability, trade waste services, behaviour of staff and all other sewerage issues. Exclude complaints about chokes, odour or billing. Australian Standard AS ISO 10002-2006 refers.<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.  |
| SB35           |         | Complaints                 | Frequent service complaint 1  |         |      | Most frequent service complaints should be entered in these two fields.  |   |
| SB36           |         | Complaints                 | Frequent service complaint 2  |         |      |  |   |
| SB36a          |         | Complaints                 | Customer contacts/inquiries   |         | n    | A request by a customer for information about a product or service provided by the sewerage utility (eg. 'an inquiry on their dual flush toilet') that does not indicate customer dissatisfaction. The customer may also call to advise the utility of asset condition (eg. report that a 'red light' is on at sewage pump station No. 200). |   |
| SB37           | [C12]   | Complaints                 | Billing   |         | n    | Complaints concerning account payment, financial loss or overcharging and billing errors. Exclude queries.   | Exclude complaints about government pricing policy, the tariff structure or queries about how the tariff is calculated.<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.  |
| SB39           | [C11]   | Complaints                 | Odour   |         | n    | Sum of odour complaints for treatment works, pumping stations and pipe network in your sewerage business.  | See Sewage Treatment/Service Levels NSW Indicators (ST68) and (ST69).<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'.  |
| SB40           | [C13]   | Complaints                 | All complaints  |         | n    | Sum of complaints: (SB34) + (SB37) + (SB38) + (SB39).  | A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Complaints from separate customers arising from the same cause count as separate complaints. Includes complaints received by the utility in person, by mail, by fax, phone, email or text message.<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'. |

Sewerage business data

| NSW No.   | NWI No. | Indicator Group          | Reported Indicator   | 2014/15 | Unit | Indicator Definition  | Instruction  |
|-----------|---------|--------------------------|--|---------|------|---|--|
| SB41      | C14     | Telephone connect time   | Percent of calls answered by an operator within 30 seconds |         | %    | Percentage of calls answered by an operator within 30 seconds. If a percentage is provided for Water indicator (WB103), do not provide a percentage here.   | <p>If your utility does not record the 'time to connect to telephone' leave this indicator blank. Exclude calls resolved by automated systems, hang-ups or where the customer has selected an incorrect dialing option.</p> <p>Examples: if a customer elects to speak with an operator via automatic dialing, the connect time is from the time when the customer was connected by the system until it is answered by an operator. The connect time starts when the call gets connected by person, (in which case the connect time would be zero), by an auto attendant (IVR) or by a message informing the caller they have been put in a queue. The connect time finishes when the caller is answered by a person. If the caller hangs up before they speak to a person, the call is not counted.</p> <p>Similarly, if the caller's question is answered by an IVR, meaning they don't need to speak to an operator, the call is not counted.</p> |
| SB43      | [C16]   | Unplanned interruptions  | Average break or choke repair time                         |         | min  | Measured from time when utility is aware that sewerage services are no longer available. This is an average based on the total minutes of all interruptions divided by the total number of  | Exclude planned interruptions, repair times relating to breaks, chokes and leaks in the property connection and time for site restoration. Include un-notified interruptions caused by third parties.  |
| Health    |         |                          |  |         |      |   |  |
| SB44      |         | Public health incidents  | Category 1 incidents                                       |         | n    | Incidents with no or inconsequential public health effects.   | Example: minor failure of sewage treatment processes.  |
| SB45      |         | Public health incidents  | Category 2 incidents                                       |         | n    | Incidents with a limited public health impact.  | Examples: an algal outbreak in receiving waters attributable to sewerage system; issue of public no-contact notice with receiving waters; sewer overflow affecting public access to land or water; sewage contamination of fishing or recreational water areas; a failure of effluent disinfection system; a failure of major treatment processes at a treatment works of more than 4 days; an incident resulting in unplanned interruptions to service of more than 3 days (if more than 20 days, report as Category 3); a chlorine leak.   |
| SB46      |         | Public health incidents  | Category 3 incidents                                       |         | n    | Incidents with a major impact on public health.   | Examples: an outbreak of water borne disease due to sewerage system; hospitalisations from water borne disease due to sewerage system; contamination of an oyster farming area; sewer overflow into a water supply catchment; an incident resulting in unplanned interruptions to service of more than 20 days.  |
| SB47      |         | Public health incidents  | Category 3 incidents detail                                |         |      |   |  |
| SB48      |         | Public health investment | Capital investment to improve health performance           |         | \$k  | Capital expenditure with the principal outcome of improved health performance.  | This indicator highlights public health improvement and innovation. Include expenditure undertaken for compliance purposes having IMPROVED performance as an outcome. Include new treatment works. Exclude renewals. (Enter \$111,500 as 111.5, \$3,999,000 as 3999 etc).  |
| Workforce |         |                          |  |         |      |   |  |
| SB49      |         | Resources and training   | Total workforce in sewerage business                       |         | FTE  | A full-time employee has an FTE of 1. Part-time and casual employees will have an FTE of less than one based on hours employed.   | Include sewerage business employees engaged in operation, maintenance and management including billing. Include equivalent contractor employees. Exclude employees engaged on design and construction.   |
| SB50      |         | Resources and training   | Female workforce   |         | FTE  |   |  |
| SB51      |         | Resources and training   | Workforce receiving 2 or more training days                |         | FTE  | The training days FTE of sewerage business employees that have undertaken at least 2 days of training in the reporting year. This number will be less than or equal to the workforce FTE.   | The training days FTE of a casual or part-time employee is the FTE of that employee multiplied by the number of days that employee trained in the reporting year.  |
| SB52      |         | Days lost                | Total days lost  |         | FTE  | Total FTE days lost for sewerage business.  | Include days lost due to workplace injury, sick leave and industrial action. Exclude recreation leave, long-service leave, public holidays, rostered days off or flexi-leave, maternity leave, jury duty, leave for Army Reserve training, etc. Exclude days lost for staff engaged in design or construction.   |
| SB53      |         | Days lost                | Confirmed injuries   |         | n    | Include sewerage business injuries that resulted in a fatality, permanent disability or time lost from work of one day or more. Include injuries for equivalent contractor employees. Exclude injuries for employees engaged in design or construction. |  |
| SB54      |         | Days lost                | Days lost due to injury                                    |         | FTE  | Total FTE days lost due to injury.  | Include days lost for injuries for equivalent contractor employees. Exclude days lost for injuries for employees engaged in design or construction.  |
| SB57      |         | Workforce outsourced     | Management costs outsourced                                |         | %    | The percentages expended by the sewerage business on outsourcing of management, operational and maintenance costs.  |  |
| SB58      |         | Workforce outsourced     | Operational costs outsourced                               |         | %    |   |  |
| SB59      |         | Workforce outsourced     | Maintenance costs outsourced                               |         | %    |   | Outsourcing is subcontracting part of the operation and/or management of a utility's business to a third party, where the subcontractor undertakes work that would normally be done by the utility's workforce. Include legal work, electrical maintenance, operation of a treatment works etc.  |

Sewerage business data

| NSW No.           | NWI No. | Indicator Group                             | Reported Indicator  | 2014/15 | Unit     | Indicator Definition  | Instruction   |
|-------------------|---------|---|---|---------|----------|---|---|
| Charges and Bills |         |   |   |         |          |   |   |
| SB60              |         | Community                                   | Reduction in fees and charges to community organisations                              |         | \$k      | The value of reductions in fees or charges permitted by legislation which are provided by the sewerage business to the community. Exclude pensioner rebates.  | Utilities may elect to provide reduced fees and charges for certain non-profit and community organisations and charities (including non-rateable properties) as permitted by legislation. This indicator reports the total amount of reductions provided to such community organisations in comparison with the standard fees and charges for non-residential customers.  |
| SB61              |         | Developer charges                           | Typical developer charge for this reporting year                                      |         | \$       | The typical developer charge per equivalent tenement determined to recover part of the cost of sewerage infrastructure for new developments.  |   |
| SB62              |         | Developer charges                           | Typical developer charge for next reporting year                                      |         | \$       |   |   |
| Environment       |         |   |   |         |          |   |   |
| SB63a             |         | Overflows                                   | Overflows   |         | n        | Include all overflows/surcharges in utility sewers, access chambers and pumping stations in any weather.  | Include contained and uncontained spills. Count each access chamber, pumping station etc. overflow as one overflow. Exclude spills or overflow caused by a blockage in the property connection sewer or customers house drains. Exclude overflows contained within emergency storages where there is no pollution of the environment.   |
| SB63b             | [E13]   | Overflows                                   | Reported overflows  |         | n        | Overflows/surcharges required to be reported to the environmental regulator.  | Exclude overflows/surcharges not required to be reported to the environmental regulator.  |
| SB64              | [A14]   | Breaks and chokes                           | Gravity (reticulation) main chokes and breaks   |         | n        | Confirmed partial or total blockages, or failures in a reticulation (gravity) sewer resulting in an interruption to the sewerage service.   | Exclude breaks and chokes in rising mains, property connections or chokes within customers house drains. Exclude pipelines carrying treated effluent.   |
| SB65              | [A14]   | Breaks and chokes                           | Rising (pressure) main chokes and breaks  |         | n        | Confirmed chokes, breaks and leaks in sewer rising (pressure) mains resulting in a significant interruption to the sewerage service.  |   |
| SB66              |         | Breaks and chokes                           | Sewer chokes and breaks attended within 5 hours                                       |         | n        |   |   |
| SB67              | [A15]   | Breaks and chokes                           | Chokes or breaks in property connections  |         | n        | Chokes, breaks or leaks in property connections resulting in an interruption to the sewerage service.   | Exclude blockages in customer's house drains (internal drains).   |
| SB69              |         | Environmental incidents                     | Category 1 incidents  |         | n        | Incidents with little or no impact on the environment.  | Examples: a reportable incident but not a breach of environmental regulations; an incident resulting in under 4 days of odour or noise complaints; a minor spillage of non-toxic chemicals or sludge to waterway or land.   |
| SB70              |         | Environmental incidents                     | Category 2 incidents  |         | n        | Incidents with limited and non-permanent impact on the environment.   | Examples: a minor breach of environmental regulations eg. non maintenance of the required environmental flows; an incident resulting in over 4 days of odour or noise complaints; a major soil erosion incident requiring remediation; a significant chemical or sludge spill to waterway or land.  |
| SB71              |         | Environmental incidents                     | Category 3 incidents  |         | n        | Incidents with major and irreversible impact on the environment.  | Examples: a dry weather sewer overflow; a major breach of environmental regulations; a major wet weather sewer overflow or an overflow for more than 3 hours; a failure of STW resulting in discharge of large volumes of untreated sewage to the environment; a major toxic chemical or sludge spill into waterways; widespread destruction of native forests/ecosystems; embankment failure of a sludge lagoon. |
| SB72              |         | Environmental incidents                     | Category 3 incidents detail   |         |          |   |   |
| SB73              |         | Environmental management                    | Environmental management plan?  |         | Y/N      |   |   |
| SB74              |         | Environmental management                    | Plan developed in consultation with other bodies including Catchment Management Board |         | Y/N      |   |   |
| SB75              |         | Environmental management                    | Environmental consultative process in place   |         | Y/N      |   |   |
| SB76              |         | Environmental management                    | Capital investment to improve environmental performance                               |         | \$k      | Capital expenditure with the principal outcome of improved environmental performance.   | This indicator highlights environmental improvement and innovation. Include expenditure undertaken for compliance purposes having IMPROVED performance as an outcome. Include new treatment works. Exclude renewals. (Enter \$111,500 as 111.5, \$3,999,000 as 3999 etc).   |
| SB77              |         | Energy                                      | Non-renewable energy  |         | MWh      |   |   |
| SB78              |         | Energy                                      | Renewable energy  |         | MWh      | Energy derived from accredited renewable sources used by the sewerage business.   |   |
| SB79              |         | Energy                                      | Total energy  |         | MWh      | Sum of (SB77) + (SB78).   |   |
| SB80a             | E10     | Greenhouse gas emissions - sewerage service | Operating emissions   |         | t CO2 eq | Greenhouse gas emissions for all operations relating to sewerage service.   | The Greenhouse Gas calculator provided to you by DPI Water will simplify this task (copy available in Appendix G on page 332 of the 2013-14 NSW Water Supply and Sewerage Benchmarking Report).   |
| SB80b             | E11     | Greenhouse gas emissions - sewerage service | Net administrative emissions  |         | t CO2 eq | Net greenhouse gas emissions for other sewerage service activities (transport, office buildings and sequestration). If your utility cannot split this value between sewerage and water, leave this field blank and place the consolidated value under water business at NSW Indicator (WB148b). | See (SB80a).  |



Sewerage treatment data

| NSW No.           | NWI No. | Indicator Group                                      | Reported Indicator                      | 2014/15 | Unit | Indicator Definition  | Instruction   |
|-------------------|---------|--|---|---------|------|---|---|
| Works Parameters  |         |  |   |         |      |   |   |
| ST1               |         | Works parameters                                     | Year built - augmented                  |         | year | Year of commissioning or latest major augmentation.   |   |
| ST10              |         | Works parameters                                     | Design capacity                         |         | EP   |   |   |
| ST2               |         | Works parameters                                     | Type of works                           |         |      | For multiple processes, hold the 'Control' key and select the processes used.   |   |
| ST3               |         | Works parameters                                     | Standard of treatment                   |         |      |   |   |
| ST5               |         | Works parameters                                     | Nitrogen removal                        |         | Y/N  | Select yes only if at least 90% of nitrogen is removed from effluent.   |   |
| ST6               |         | Works parameters                                     | Phosphorus removal                      |         | Y/N  | Select yes only if this treatment works operates either a chemical dosing facility to precipitate phosphorus or a carefully managed biological nutrient removal (BNR) system.   |   |
| ST25a             |         | Charge for recycled town water from this works       | Usage charge for recycled town water    |         | c/kL |   |   |
| Operator Training |         |  |   |         |      |   |   |
| ST7i              |         | Qualifications                                       | Operator 1 name                         |         |      | The name of the operator.   |   |
| ST7a              |         | Qualifications                                       | Operator 1 qualification                |         |      | Highest qualification obtained by this operator.<br>Qualification level ie. Certificate III in Water Industry Operations (Wastewater Treatment Operator) issued by NSW TAFE: Office of Water Phosphorus Removal Certificate (Level 1A or Level 1B Certificate pre-requisite), Certificate Level 1B (Activated Sludge), Certificate Level 1A (Trickling Filter and Aerated Lagoons) or Certificate Level 0B (STW with <3,000 ep Activated Sludge) or Certificate Level 0A (STW with < 3,000 ep Trickling Filter and Aerated Lagoons) issued by the NSW Office of Water or its predecessors. Certificate IV, III, II or I from NSW TAFE: Certificate IV, III, II or I by OTHER RTO. |   |
| ST7e              |         | Qualifications                                       | Year of qualification or update         |         | year | Year qualification obtained or updated.   |   |
| ST7j              |         | Qualifications                                       | Operator 1 qualification level          |         |      | Qualification level obtained by this operator.  |   |
| ST7k              |         | Qualifications                                       | Operator 2 name                         |         |      | The name of the operator.   |   |
| ST7b              |         | Qualifications                                       | Operator 2 qualification                |         |      | Highest qualification obtained by this operator.<br>See (ST7a).   |   |
| ST7f              |         | Qualifications                                       | Year of qualification or update         |         | year | Year qualification obtained or updated.   |   |
| ST7l              |         | Qualifications                                       | Operator 2 qualification level          |         |      | Qualification level obtained by this operator.  |   |
| ST7m              |         | Qualifications                                       | Operator 3 name                         |         |      | The name of the operator.   |   |
| ST7c              |         | Qualifications                                       | Operator 3 qualification                |         |      | Highest qualification obtained by this operator.<br>See (ST7a).   |   |
| ST7g              |         | Qualifications                                       | Year of qualification or update         |         | year | Year qualification obtained or updated.   |   |
| ST7n              |         | Qualifications                                       | Operator 3 qualification level          |         |      | Qualification level obtained by this operator.  |   |
| ST7o              |         | Qualifications                                       | Operator 4 name                         |         |      | The name of the operator.   |   |
| ST7d              |         | Qualifications                                       | Operator 4 qualification                |         |      | Highest qualification obtained by this operator.<br>See (ST7a).   |   |
| ST7h              |         | Qualifications                                       | Year of qualification or update         |         | year | Year qualification obtained or updated.   |   |
| ST7p              |         | Qualifications                                       | Operator 4 qualification level          |         |      | Qualification level obtained by this operator.  |   |
| Trade Waste       |         |  |   |         |      |   |   |
| ST36              |         | Large trade waste dischargers serviced by this works | Number of large trade waste dischargers |         | n    | A large trade waste discharger (LTWD) is one approved to discharge over 20 kL/d into the sewerage system.   |   |
| ST37              |         | Large trade waste dischargers serviced by this works | Maximum daily volume                    |         | kL/d |   |   |
| ST38              |         | Large trade waste dischargers serviced by this works | Equivalent BOD load                     |         | EP   | Total approved trade waste BOD-5 concentration converted to EP.   | EP = (concentration (mg/L) x discharge volume (kL/d))/70. |
| ST39              |         | Large trade waste dischargers serviced by this works | Equivalent TSS load                     |         | EP   | Total approved trade waste SS concentration converted to EP.  | EP = (concentration (mg/L) x discharge volume (kL/d))/70. |

Sewerage treatment data

| NSW No.          | NWI No. | Indicator Group                         | Reported Indicator   | 2014/15 | Unit       | Indicator Definition  | Instruction   |
|------------------|---------|---|--|---------|------------|---|---|
| Service Levels   |         |   |  |         |            |   |   |
| ST67             |         | Malfunctions at this works              | Number of days of major treatment process failure  |         | days       | Include days when a significant treatment process was not operating. Exclude periods due to routine maintenance.  | Include loss of MLSS and odour production.  |
| ST68             | [C11]   | Odour complaints relating to this works | Number of odour complaints from this treatment works   |         | n          | Exclude complaints that have been investigated and can be shown not to arise from this treatment works.   | A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the utility, its employees or contractors. Complaints from separate customers arising from the same cause count as separate complaints. Includes complaints received by the water business in person, by mail, fax, phone, email or text message.<br><br>If the operator is uncertain whether the customer is DISSATISFIED, the operator should ask 'Do you wish to report a complaint on this matter?'. |
| ST69             | [C11]   | Odour complaints relating to this works | Number of odour complaints from pumping stations and the sewerage network in this treatment work's catchment |         | n          | Exclude complaints that have been investigated and can be shown not to arise from the network or pumping stations.  | See (ST68).   |
| Sampling Results |         |   |  |         |            |   |   |
| ST8              |         | Compliance summary                      | Licence expiry date  |         | date       |   |   |
| ST9              |         | Compliance summary                      | Volume licenced  |         | ML/d       |   |   |
| ST64             | E7      | Compliance summary                      | Compliance with environmental regulators   |         | Y/N        | Compliance occurs when the licence conditions prescribed for the treatment plant and all attached system components (network, treatment, recycling and disposal) have been met.   | Non-compliance is where your utility did not meet licence conditions, or received a financial penalty (>\$10,000) or had any successful litigation against it, by the environmental regulator. Include: penalties relating to infringements occurring in a previous reporting year.   |
| ST65             |         | Compliance summary                      | Penalty or litigation for non-compliance   |         | Y/N        | Include successful litigation against your utility by an environmental regulator, a financial penalty, any other penalty imposed by an enviromental regulator.  |   |
| ST66             |         | Compliance summary                      | Details of penalty or litigation   |         |            | Provide brief details of penalties and litigation.  |   |
| ST89             |         | Compliance summary                      | Pollution Incident Response Management Plan?   |         | Y/N        | Is a Pollution Incident Response Management Plan (PIRMP) currently in place for this sewage treatment works?  |   |
| ST63             |         | Sampling days                           | Number of scheduled sampling days  |         | days       | The scheduled sampling days are those specified in the treatment work's licence.  |   |
| ST49             |         | Biochemical oxygen demand               | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST50             |         | Biochemical oxygen demand               | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST51             |         | Total suspended solids                  | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST52             |         | Total suspended solids                  | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST53             |         | Nitrogen (total)                        | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST54             |         | Nitrogen (total)                        | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST55             |         | Ammonia                                 | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Many licences specify that where a limit is not specified, no concentration of the pollutant is authorised to be released. |   |
| ST56             |         | Ammonia                                 | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST59             |         | Phosphorus (total)                      | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST60             |         | Phosphorus (total)                      | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST57             |         | Oil and grease                          | 90th percentile limit  |         | mg/L       | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST58             |         | Oil and grease                          | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |
| ST61             |         | Faecal coliforms                        | 90th percentile limit  |         | cfu/100 mL | The limit shown is reproduced from this plant's EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Absence of a value indicates that no limit is specified.   |   |
| ST62             |         | Faecal coliforms                        | Percent compliance   |         | %          | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be  |   |

Sewerage treatment data

| NSW No.    | NWI No. | Indicator Group                             | Reported Indicator                   | 2014/15 | Unit | Indicator Definition   | Instruction   |
|------------|---------|---|--------------------------------------|---------|------|--|---|
| ST71       |         | pH  | Percent compliance                   |         |      | The limit shown is reproduced from this treatment works' EPA licence. 100 percentile limits are shown where 90th percentiles are not specified. Many licences specify that where a limit is not specified, no concentration of the pollutant is authorised to be released.                         |   |
| ST72       |         | pH  | Percent compliance                   |         | %    | Where the licence specifies a 90th percentile limit and the number of complying samples divided by the total number of scheduled samples is greater than 90%, compliance is deemed to be 100%.   |   |
| ST73       |         | Overall                                     | Percent compliance                   |         | %    | Overall sampling result covering all pollutants applicable in the treatment works' EPA licence – BOD, SS, Total Nitrogen, Ammonia, Oil & Grease, Total Phosphorus, Faecal Coliforms, pH. Results at the 50th percentile limit should be taken into account in the overall result.                  |   |
| Water Data |         |   |                                      |         |      |  |   |
| ST32       | [W16]   | Volumes collected by this works             | Network residential                  |         | ML   | Estimated network residential sewage.  |   |
| ST33       | [W16]   | Volumes collected by this works             | Network non-residential              |         | ML   | Estimated network non-residential sewage excluding sewer mining.   |   |
| ST31       | [W16]   | Volumes collected by this works             | Network infiltration - inflow        |         | ML   | Estimated groundwater infiltration and stormwater inflow.  |   |
| ST33a      | W18.2   | Volumes collected by this works             | Sewage received from other utilities |         | ML   | Bulk volume of sewage received from other utilities outside your utility's geographic area of responsibility.  |   |
| ST33b      | W18.3   | Volumes collected by this works             | Sewage collected from sewer mining   |         | ML   | Volumes collected from sewer mining within your utility's geographic area of responsibility.   |   |
| ST12       | [W16]   | Volumes collected by this works             | Tankered septic tank effluent        |         | kL   | Enter volume in kilolitres not Megalitres.   |   |
| ST13       | [W16]   | Volumes collected by this works             | Tankered septic sludge - pan         |         | kL   | Enter volume in kilolitres not Megalitres.   |   |
| ST34       | W17     | Volumes collected by this works             | Network trade waste                  |         | ML   | Estimated non-metered and metered network trade waste.   |   |
| ST14       | [W16]   | Volumes collected by this works             | Tankered grease trap waste           |         | kL   | Enter volume in kilolitres not Megalitres.   |   |
| ST15       | W18     | Volumes collected by this works             | Total sewage collected               |         | ML   | Sum of all volumes collected: (ST31) + (ST32) + (ST33) + (ST34) + (ST12) + (ST13) + (ST14).  |   |
| ST16       |         | Volumes treated by this works               | No treatment                         |         | ML   |  |   |
| ST17       | E1      | Volumes treated by this works               | Primary treatment only               |         | ML   | Include only volume treated to remove suspended solids (primary standard). Exclude volumes treated to secondary or tertiary standard.  | Primary treatment may include screening, clarification and grease removal.  |
| ST18       | E2      | Volumes treated by this works               | Secondary treatment only             |         | ML   | Include only volume treated to primary standard with further polishing of effluent to reduce at least 85% of biochemical oxygen demand and suspended solids (secondary standard). Exclude volume treated to primary standard only or tertiary standard.  | Secondary treatment may include a polishing step, activated sludge, anaerobic/aerobic processes, biological/sand filtration and lagoon sedimentation.   |
| ST19       | E3      | Volumes treated by this works               | Tertiary treatment only              |         | ML   | Include only volume treated to secondary standard with further disinfection of effluent and filtering to remove nutrients and nitrogen using artificial wetland, ponds, chlorination, ozonation or UV treatment (tertiary standard). Exclude volume treated to primary or secondary standard only. | Tertiary treatment may include biological/chemical dosing nutrient removal, reverse osmosis, advanced filtration systems, membrane bioreactors and secondary treatment with wetland nutrient removal. |
| ST80       | [W20]   | Volumes recycled and supplied by this works | Residential                          |         | ML   | Recycled water for potable and non-potable town water supply reticulated to residential customers. Excludes urban stormwater use.  | Include metered and estimated unmetered recycled water supplied.  |
| ST81       | [W21]   | Volumes recycled and supplied by this works | Commercial, Industrial, Municipal    |         | ML   | Recycled water supplied to commercial, industrial, municipal properties. Includes golf courses. Excludes urban stormwater use.   |   |
| ST82       | [W22]   | Volumes recycled and supplied by this works | Agricultural                         |         | ML   | Recycled water supplied for agricultural purposes. Includes irrigation, forestry and livestock. Excludes urban stormwater use.   |   |
| ST83       | [W23]   | Volumes recycled and supplied by this works | Environmental                        |         | ML   | Recycled water supplied for environmental purposes as prescribed by the environmental regulator. Includes discharge to rivers, sea or natural wetlands, provided there is a beneficial use rather than disposal.   |   |
| ST84       | [W24]   | Volumes recycled and supplied by this works | On-site                              |         | ML   | Recycled water used on-site external to the treatment process.   |   |
| ST85       | [W25]   | Volumes recycled and supplied by this works | Other                                |         | ML   | Recycled water supplied to other users including managed aquifer recharge, firefighting, mains flushing, losses and leakage.   |   |
| ST86       | [W25.1] | Volumes recycled and supplied by this works | Managed aquifer recharge             |         | ML   | Recycled water supplied for managed aquifer recharge, excluding environmental water and urban stormwater use.  |   |
| ST87       | [W15]   | Volumes recycled and supplied by this works | Bulk recycled water exports          |         | ML   | Recycled water supplied to other utilities or entities outside your utility's geographic area of responsibility. Excludes urban stormwater.  |   |



Sewerage treatment data

| NSW No. | NWI No. | Indicator Group                             | Reported Indicator                              | 2014/15 | Unit   | Indicator Definition   | Instruction |
|---------|---------|---|---|---------|--------|--|-------------|
| ST88    | [W26]   | Volumes recycled and supplied by this works | Total recycled supplied                         |         | ML     | Total treated effluent excluding evaporation and urban stormwater use. ST88 = ST80 + ST81 + ST82 + ST83 + ST84 + ST85 or NWI Indicator W26 = W20 + W21 + W22 + W23 + W24 + W25.  |             |
| ST40    |         | Volumes disposed by this works              | Volume disposed to ocean                        |         | ML     | Include effluent disposed within estuaries.  |             |
| ST41    |         | Volumes disposed by this works              | Volume disposed to river - creek                |         | ML     | Include effluent disposed to wetlands connected to a river or creek. Exclude disposal within estuaries. Exclude volumes recycled for environmental purposes.   |             |
| ST42    |         | Volumes disposed by this works              | Volume disposed to land                         |         | ML     | Include effluent disposed to evaporation basins, dunes and exfiltration beds. Exclude recycled water (ie. reuse farms etc).  |             |
| ST70    | W18.1   | Volume exported by this works               | Sewage supplied to other utilities              |         | ML     | Bulk volume of sewage supplied to other utilities outside your utility's geographic area of responsibility.  |             |
| ST43    |         | Flow data                                   | Average dry weather flow - permanent population |         | L/s    | Summed values of dry weather flows outside peak population periods divided by number of these records.   |             |
| ST44    |         | Flow data                                   | Average dry weather flow - peak population      |         | L/s    | Summed values of dry weather flows during peak population periods divided by number of these records.  |             |
| ST45    |         | Flow data                                   | Peak dry weather flow - permanent population    |         | L/s    | Maximum flow rate recorded during dry weather outside peak population periods.   |             |
| ST46    |         | Flow data                                   | Peak dry weather flow - peak population         |         | L/s    | Maximum flow rate recorded during dry weather during peak population periods.  |             |
| ST48    |         | Flow data                                   | Peak 1 hour wet weather flow                    |         | L/s    | Maximum volume recorded in any 1 hour period following a wet weather event during the reporting year.  |             |
| ST47    |         | Flow data                                   | Peak 24 hr wet weather volume                   |         | ML     | Maximum volume recorded in any 24 hour period following a wet weather event during the reporting year.   |             |
| ST26    | [E8]    | Biosolids produced by this works            | Mass extracted                                  |         | tonnes | Include stabilised organic solids extracted from effluent. Exclude screened inorganic material.  |             |
| ST27    | E8      | Biosolids produced by this works            | Percentage of mass reused                       |         | %      | Include application as a soil conditioner on land used for agriculture or forestry, rehabilitation of mine and industrial sites and general landscaping. Include use in manufacturing other products. Include energy generation. Exclude landfill. |             |
| ST29    |         | Biosolids produced by this works            | Percent of total disposed to landfill           |         | %      | Include injection below ground level, burial and disposal to tip or treatment works site.  |             |
| ST30    |         | Biosolids produced by this works            | Percent to other                                |         | %      | Include incineration.  |             |

## Australian Drinking Water Guidelines 2011 and NSW Health Drinking Water Monitoring Program – Sampling location and frequency

### Guidelines

The Australian Drinking Water Guidelines 2011 (NHMRC/NRMMC) supersede the 2004 Guidelines. The 2011 Guidelines continue to emphasise the need to implement a framework for good management of drinking water supplies in order to assure safety at point of use.

NSW local water utilities (LWUs) are required to adopt a 'best practice' approach for the supply of drinking water using the Framework for Management of Drinking Water Quality (*Public Health Act 2010*). LWUs need to prepare and implement a risk based drinking water management system by 1 September 2014 in accordance with the NSW guidelines for drinking water management systems, NSW Health and NSW Office of Water, 2013. Refer also to pages 9 and 10 of the *2014-15 NSW Water Supply and Sewerage Benchmarking Report*. The management systems must include verification monitoring of drinking water quality. The measurable characteristics fall into the following categories:

- Microbiological
- Physical
- Chemical
- Radiological.

For each characteristic, the Guidelines identify three parameters, namely location of sampling, frequency of sampling and acceptable performance measures. Compliance requires that all three parameters be satisfied. NSW Health advises each LWU of the recommended minimum number of samples to be tested annually. See the *NSW Health Drinking Water Monitoring Program* booklet for more information.

Table 1 indicates the number of microbiological samples recommended annually for systems supplying populations of varying sizes. See note to Table 1.

### Sampling location

Samples for verification monitoring should be taken at representative locations throughout the drinking water distribution system. Suggested locations for each characteristic are shown on pages 9-19 (page numbers refer to the 2011 Guidelines). NSW Health recommends that drinking water quality monitoring rotate amongst designated sample sites throughout the distribution system. Sample sites should give good geographical representation of

the water supply system and enable the comparison of water quality over time for particular sections of the system. For more information refer to the NSW Health Drinking Water Monitoring Program

(<http://www.health.nsw.gov.au/environment/water/Pages/drinkwater-nsw.aspx>).

### Sampling frequency

The frequency of sampling is dependent on the type of characteristic. The suggested sampling frequency for various drinking water characteristics are shown on pages 9-20 to 9-21.

The sampling frequency required for microbiological quality is provided in Table 9.4 on page 9-20 and summarised in Table 1 below. The frequency should be increased following repair work, interruptions to supply, at times of flooding or during/after emergency operations. With small water supply systems, periodic sanitary surveys are likely to yield more information than infrequent sampling.

**Table 1 - Microbiological sampling frequency**

| <b>Discrete systems</b><br>(supplying a single town and surrounds)  |   |
|---|---|
| <b>Town population</b>  | <b>Recommended minimum number of samples<sup>+</sup></b>  |
| <100  | 12 samples per year (1 per month)   |
| <500  | 26 samples per year (1 per fortnight)   |
| 500 - 5,000   | 52 samples per year (1 per week)  |
| 5,000 - 100,000   | 52 samples per year (1 per week), plus one additional sample per month for each 5,000 above 5,000 |
| >100,000  | 6 samples per week, plus one additional sample per month for each 10,000 above 100,000            |
| + Note: The above indicates that for a system supplying a population of under 100, under 500, 5,000, 50,000, 100,000 and 150,000, the recommended minimum number of samples per year are 12, 26, 52, 160, 280 and 380 respectively. |   |
| <b>Complex systems</b><br>(supplying more than one town and surrounds)  |   |
| Note: the sample numbers apply to each town or zone within the system and the total number of samples must be not less than 52  |   |
| <1,000  | 12 samples per year (1 per month)   |
| 1,000 - 5,000   | 26 samples per year (1 per fortnight)   |
| 5,000 - 100,000   | 52 samples per year (1 per week), plus one additional sample per month for each 5,000 above 5,000 |

The sampling frequency required for physical, chemical and radiological quality is provided in *NSW Health Drinking Water Monitoring Program* and Table 9.5 on page 9-21 and summarised in Tables 2 and 3 below.

Sampling for the key physical characteristics should be carried out as shown in Table 5 where these are significant.

**Table 2 - Physical quality sampling frequency+**

| Characteristic   | Sampling frequency  |
|--|---|
| pH, Turbidity, Colour, total dissolved solids (or conductivity)  | Weekly at water treatment works or chlorinator. Monthly sample to lab in systems serving a population of 5,000 or more, otherwise biannually. |
| Hardness   | Monthly or more frequent at treatment works (or lab) if treating for hardness. Otherwise as above.  |
| + All of these are aesthetic (non-health related). However, turbidity >1 may reduce the effectiveness of disinfection. |   |

NSW Health recommends monthly physical/chemical sampling for systems serving a population of 5,000 or more, otherwise biannually. NSW Health recommends a minimum set of characteristics to be tested (see Table 3). In addition, tests for key characteristics of a particular water supply should be undertaken more frequently as shown in Table 3 where these are significant.

**Table 3 - Chemical quality sampling frequency#**

| Characteristic   | Sampling frequency  |
|--|---|
| Fluoride   | Daily at treatment works and monthly sample to lab if the water supply is fluoridated |
| Antimony, arsenic, cadmium, chromium, copper, fluoride, iodine, iron, lead, manganese, mercury, nickel, nitrate, nitrite, sulfate  | Monthly in systems serving a population of 5,000 or more, otherwise biannually.       |
| # NSW Health may agree to vary this list where indicated by a risk assessment. NSW Health Forensic and Analytical Science service test for a wider range of characteristics than listed above. |   |

The need for radiological (Radionuclides) sampling should be assessed annually. New supplies should be assessed quarterly for one year, then every 2 years (groundwater) or 5 years (surface water).

Increase frequency to quarterly if guideline screening levels are exceeded (page 9-21).

Water utilities should assess risks and, if necessary, monitor to satisfy themselves of the safety of their supply with respect to pesticides, disinfection by-products and other organic chemicals. Pesticide and organic toxicants – monthly or quarterly sampling if previously (or potentially) detected; seasonally annually, or event-related (e.g. storm events, spills) for other pesticides/organic toxicants.

In order to satisfy the guidelines it may be necessary to carry out more frequent monitoring for some characteristics. Each water utility should carry out a detailed assessment of its water supply system when planning a monitoring program.

## Performance

Performance measure for *Escherichia coli* within the distribution system is summarised in Table 4.

**Table 4 - Microbiological performance**

| Indicator  | Guideline value  |
|--|--|
| E. coli  | Should not be detected in a minimum 100mL sample of drinking water.<br>If detected, immediate corrective action must be taken <sup>1</sup> . |
| 1 Such action is needed to determine whether there is a real problem with drinking water quality in accordance with the NSW Health Protocol: ( <a href="http://www.health.nsw.gov.au/environment/water/Pages/nswhrp-microbiological.aspx">http://www.health.nsw.gov.au/environment/water/Pages/nswhrp-microbiological.aspx</a> ) |  |

Microbiological compliance is achieved if the required number of samples has been tested and at least 98% of the samples had no *E. coli*. This value (98%) has been determined by NSW Health in accordance with section 10.3.1 on page 10-11 of 2011 ADWG and is the same value as applied for the 2004 ADWG.

Tables 10.4 and 10.5 on pages 10-19 to 10-32 of the guidelines summarise the guideline values for microbial, chemical and physical characteristics, to provide a ready reference when monitoring results are being evaluated. More detailed information on each characteristic can be found in the relevant fact sheet in the guidelines.



## Examples of environmental and public health incidents

### Water supply

**Environmental incidents** (NSW Indicators WB137 to WB140 on page 222)

Category 1 – Minor incidents with inconsequential effects

- A reportable incident but not a breach of environmental regulations.
- An incident resulting in under four days of odour or noise complaints.
- A minor spillage of non-toxic chemicals or sludge to waterway or land.

Category 2 – Incident with limited environmental effects

- A minor breach of environmental regulations, e.g. non maintenance of the required environmental flows.
- An incident resulting in over four days of odour or noise complaints.
- A major soil erosion incident requiring remediation.
- A significant chemical or sludge spill to waterway or land.

Category 3 – Severe incident with irreversible environmental effects

- A major breach of environmental regulations.
- A dam failure.
- A severe algal outbreak in storages/waterways.
- A major toxic chemical or sludge spill into waterways.
- Widespread destruction of native forests/ecosystems.

**Public health incidents** (NSW Indicators WB115 to WB118 on page 221)

Category 1 – Minor incidents with inconsequential effects

- A minor failure of water treatment processes.
- An incident resulting in a limited boil water notice.

Category 2 – Incidents with limited health effects

- Non-compliance with health parameters (E. coli) of 2011 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) for over seven days.
- A system-wide boil water notice.
- A failure of a disinfection system for over three days.
- A failure of major treatment processes at a treatment works for over four days.
- A chlorine or ammonia gas leak (chlorination/chloramination).
- Non-pathogenic/toxic contamination of the potable water supply due to a cross connection.
- An incident resulting in unplanned interruptions to supply for > 2 days (if > 7 days report as Category 3).

Category 3 – Incidents with major health effects

- An outbreak of water borne disease due to water supply system.
- Hospitalisations from water borne disease due to water supply.
- An incident resulting in unplanned interruptions to supply for over seven days.
- A pathogenic contamination of the potable water supply due to a cross connection.
- A toxic contamination of water supply.

#### Notes:

(16) Environmental regulations include any licence conditions.

(17) An incident with both environmental and public health impacts should be reported in both categories.

### Sewerage

**Environmental incidents** (NSW Indicators SB69 to SB72 on page 230)

- Category 1 – Minor Incidents with Inconsequential Effects

- A reportable incident but not a breach of environmental regulations
- An incident resulting in under 4 days of odour or noise complaints
- A minor spillage of non-toxic chemicals or sludge to waterway or land

#### Category 2 – Incident with limited environmental effects

- A minor breach of environmental regulations, e.g.:
  - discharge of partially treated effluent to receiving waters
  - embankment failure of an effluent pond.
- A wet weather sewer overflow for under three hours.
- An incident resulting in over four days of odour or noise complaints.
- A major soil erosion incident requiring remediation.
- A significant chemical or sludge spill to waterways or land.

#### Category 3 – Severe incident with irreversible environmental effects

- A dry weather sewer overflow
- A major breach of environmental regulations, e.g.:
  - a major wet weather sewer overflow or an overflow for over three hours
  - a failure of STW, resulting in discharge of large volume of untreated sewage to environment
  - a major toxic chemical or sludge spill into waterways
  - widespread destruction of native forests/ecosystems
  - embankment failure of a sludge lagoon.

### Public health incidents (NSW Indicators SB44 to SB47 on page 229)

#### Category 1 – Minor Incidents with Inconsequential Effects

- A minor failure of sewage treatment processes.

#### Category 2 – Incidents with limited health effects

- An algal outbreak in receiving waters attributable to sewerage system.
- Issue of public no-contact notice with receiving waters.
- Sewer overflow affecting public access to land or water.
- Sewage contamination of fishing or recreational water areas.
- A failure of effluent disinfection system.
- A failure of major treatment processes at a treatment works for over four days.
- An incident resulting in unplanned interruptions to service for over three days (if over 20 days, report as Category 3).
- A chlorine leak.

#### Category 3 – Incidents with major health effects

- An outbreak of water borne disease due to sewerage system.
- Hospitalisations from water borne disease due to sewerage system.
- Contamination of an oyster farming area due to sewerage system.
- A sewer overflow into a water supply catchment.
- An incident resulting in unplanned interruptions to service for over 20 days.

## Special schedules (financial statements)

### NSW Council

#### Special Schedule No. 3

#### Water Supply Income Statement

#### (Gross including Internal Transactions)

#### for the year ended 2015

\$'000

| A    | Expenses and Income                                | 2015 | 2014 |
|------|--|------|------|
|      | <b>Expenses</b>                                    |      |      |
| 1    | Management expenses                                |      |      |
|      | a. Administration                                  |      |      |
|      | b. Engineering and Supervision                     |      |      |
| 2    | Operation and Maintenance                          |      |      |
|      | - Dams and Weirs                                   |      |      |
|      | a. Operation expenses                              |      |      |
|      | b. Maintenance expenses                            |      |      |
|      | - Mains  |      |      |
|      | c. Operation expenses                              |      |      |
|      | d. Maintenance expenses                            |      |      |
|      | - Reservoirs                                       |      |      |
|      | e. Operation expenses                              |      |      |
|      | f. Maintenance expenses                            |      |      |
|      | - Pumping Stations                                 |      |      |
|      | g. Operation expenses (excluding energy costs)     |      |      |
|      | h. Energy costs                                    |      |      |
|      | i. Maintenance expenses                            |      |      |
|      | - Treatment  |      |      |
|      | j. Operation expenses (excluding chemical costs)   |      |      |
|      | k. Chemical costs                                  |      |      |
|      | l. Maintenance expenses                            |      |      |
|      | - Other  |      |      |
|      | m. Operation expenses                              |      |      |
|      | n. Maintenance expenses                            |      |      |
|      | o. Purchase of water                               |      |      |
| 3.   | Depreciation                                       |      |      |
|      | a. System assets                                   |      |      |
|      | b. Plant and equipment                             |      |      |
| 4.   | Miscellaneous expenses                             |      |      |
|      | a. Interest expenses                               |      |      |
|      | b. Revaluation decrements                          |      |      |
|      | c. Other expenses                                  |      |      |
|      | d. Impairment system assets                        |      |      |
|      | e. Impairment plant and equipment                  |      |      |
|      | f. Aboriginal Communities Water & Sewerage Program |      |      |
| 5.   | <b>Total expenses</b>                              |      |      |
|      | <b>Income</b>                                      |      |      |
| 6.   | Residential charges                                |      |      |
|      | a. Access (including rates)                        |      |      |
|      | b. Usage charges                                   |      |      |
| 7.   | Non-residential charges                            |      |      |
|      | a. Access (including rates)                        |      |      |
|      | b. Usage charges                                   |      |      |
| 8.   | Extra charges                                      |      |      |
| 9.   | Interest income                                    |      |      |
| 10.  | Other income                                       |      |      |
| 10a. | Aboriginal Communities Water and Sewerage Program  |      |      |
| 11.  | Grants   |      |      |
|      | a. Grants for acquisition of assets                |      |      |
|      | b. Grants for pensioner rebates                    |      |      |
|      | c. Other grants                                    |      |      |



## NSW Council

### Special Schedule No. 3 (continued) Water Supply Income Statement (Gross including Internal Transactions) for the year ended 2015 \$'000

|  | 2015 | 2014 |
|--|------|------|
| <b>A Expenses and Income (continued)</b>                             |      |      |
| 12. Contributions  |      |      |
| a. Developer charges   |      |      |
| b. Developer provided assets   |      |      |
| c. Other contributions   |      |      |
| 13. <b>Total income</b>  |      |      |
| 14. Gain or loss on disposal of assets                               |      |      |
| 15. Operating result   |      |      |
| 15a. <b>Operating result</b> (less grants for acquisition of assets) |      |      |
| <b>B Capital transactions</b>  |      |      |
| <b>Non-operating expenditures</b>                                    |      |      |
| 16. Acquisition of Fixed Assets                                      |      |      |
| a. New assets for Improved Standards                                 |      |      |
| b. New assets for Growth   |      |      |
| c. Renewals  |      |      |
| d. Plant and equipment   |      |      |
| 17. Repayment of debt  |      |      |
| a. Loans   |      |      |
| b. Advances  |      |      |
| c. Finance leases  |      |      |
| 18. Transfer to sinking fund   |      |      |
| 19. <b>Totals</b>  |      |      |
| <b>Non-operating funds employed</b>                                  |      |      |
| 20. Proceeds from disposal of assets                                 |      |      |
| 21. Borrowing utilised   |      |      |
| a. Loans   |      |      |
| b. Advances  |      |      |
| c. Finance leases  |      |      |
| 22. Transfer from sinking fund                                       |      |      |
| 23. <b>Totals</b>  |      |      |
| <b>C Rates and charges</b>   |      |      |
| 24. Number of assessments  |      |      |
| a. Residential (occupied)  |      |      |
| b. Residential (unoccupied ie vacant lot)                            |      |      |
| c. Non-residential (occupied)  |      |      |
| d. Non-residential (unoccupied ie vacant lot)                        |      |      |
| 25. Number of ETs for which developer charges were received          |      | ET   |
| 26. Total amount of pensioner rebates                                | \$   |      |

## NSW Council

### Special Schedule No. 3 (continued)

#### Water Supply – Cross-subsidies

as at 30 June 2015

\$'000

|   | Yes                  | No                   | Amount |
|---|----------------------|----------------------|--------|
| <b>D Best practice annual charges and developer charges<sup>#</sup></b>   |                      |                      |        |
| <b>27. Annual charges</b>   |                      |                      |        |
| a. Does Council have best-practice water supply annual charges and usage charges*?  | <input type="text"/> | <input type="text"/> |        |
| If Yes, go to 28a.  |                      |                      |        |
| If No, please report if council has removed <b>land value</b> from access charges (ie rates)?   | <input type="text"/> | <input type="text"/> |        |
| <p>* Such charges for both residential customers and non-residential customers comply with section 3.2 of <i>Water Supply, Sewerage and Trade Waste Pricing Guidelines</i>, NSW Office of Water, December, 2002. Such charges do not involve significant cross-subsidies.</p> |                      |                      |        |
| b. Cross-subsidy <b>from</b> residential customers using less than allowance (page 25 of Guidelines)  |                      |                      |        |
| c. Cross-subsidy <b>to</b> non-residential customers (page 24 of Guidelines)  |                      |                      |        |
| d. Cross-subsidy <b>to</b> large connections in unmetered supplies (page 26 of Guidelines)  |                      |                      |        |
| <b>28. Developer charges</b>  |                      |                      |        |
| a. Has council completed a water supply Development Servicing** Plan?   | <input type="text"/> | <input type="text"/> |        |
| b. Total cross-subsidy in water supply developer charges for 2014/15 (page 47 of Guidelines)  |                      |                      |        |
| <p>** In accordance with page 9 of <i>Developer Charges Guidelines for Water Supply, Sewerage and Stormwater</i>, NSW Office of Water, December, 2002.</p>  |                      |                      |        |
| <b>29. Disclosure of cross-subsidies</b>  |                      |                      |        |
| <b>Total of cross-subsidies (27b +27c + 27d + 28b)</b>  |                      |                      |        |

# Councils which have not yet implemented best practice water supply pricing should disclose cross-subsidies in items 27b, 27c and 27d above.

However, disclosure of cross-subsidies is **not** required where a Council has implemented best practice pricing and is phasing in such pricing over a period of three years.

## NSW Council

### Special Schedule No. 4 Water Supply – Statement of Financial Position (Gross including Internal Transactions) as at 30 June 2015 \$'000

|  | Current | Non current | Total |
|--|---------|-------------|-------|
| <b>ASSETS</b>  |         |             |       |
| 30. Cash and investments                                   |         |             |       |
| a. Developer charges                                       |         |             |       |
| b. Special purpose grants                                  |         |             |       |
| c. Accrued leave   |         |             |       |
| d. Unexpended loans  |         |             |       |
| e. Sinking fund  |         |             |       |
| f. Other   |         |             |       |
| 31. Receivables  |         |             |       |
| a. Specific purpose grants                                 |         |             |       |
| b. Rates and charges                                       |         |             |       |
| c. User charges  |         |             |       |
| d. Other   |         |             |       |
| 32. Inventories  |         |             |       |
| 33. Property, plant and equipment                          |         |             |       |
| a. System assets   |         |             |       |
| b. Plant and equipment                                     |         |             |       |
| 34. Other assets   |         |             |       |
| 35. <b>Total assets</b>                                    |         |             |       |
| <b>LIABILITIES</b>   |         |             |       |
| 36. Bank overdraft   |         |             |       |
| 37. Creditors  |         |             |       |
| 38. Borrowings   |         |             |       |
| a. Loans   |         |             |       |
| b. Advances  |         |             |       |
| c. Finance leases  |         |             |       |
| 39. Provisions   |         |             |       |
| a. Tax equivalents   |         |             |       |
| b. Dividend  |         |             |       |
| c. Other   |         |             |       |
| 40. <b>Total liabilities</b>                               |         |             |       |
| 41. <b>Net assets committed</b>                            |         |             |       |
| <b>EQUITY</b>  |         |             |       |
| 42. Accumulated surplus                                    |         |             |       |
| 43. Asset revaluation reserve                              |         |             |       |
| 44. <b>Total equity</b>                                    |         |             |       |
| <b>Note to system assets:</b>                              |         |             |       |
| 45. Current replacement cost of system assets              |         |             |       |
| 46. Accumulated current cost depreciation of system assets |         |             |       |
| 47. Written down current cost of system assets             |         |             |       |



## NSW Council

### Special Schedule No. 5 Sewerage Income Statement (Gross including Internal Transactions) as at 30 June 2015 \$'000

|  | 2015 | 2014 |
|--|------|------|
| <b>A Expenses and Income</b>   |      |      |
| <b>Expenses</b>  |      |      |
| 1. Management expenses   |      |      |
| a. Administration  |      |      |
| b. Engineering and Supervision   |      |      |
| 2. Operations and Maintenance Expenses                                     |      |      |
| - Mains  |      |      |
| a. Operation expenses  |      |      |
| b. Maintenance expenses  |      |      |
| - Pumping Stations   |      |      |
| c. Operation expenses (excluding energy costs)                             |      |      |
| d. Energy costs  |      |      |
| e. Maintenance expenses  |      |      |
| - Treatment  |      |      |
| f. Operation expenses (excluding chemical, energy, effluent and biosolids) |      |      |
| g. Chemical costs  |      |      |
| h. Energy costs  |      |      |
| i. Effluent management   |      |      |
| j. Biosolids management  |      |      |
| k. Maintenance expenses  |      |      |
| - Other  |      |      |
| l. Operation expenses  |      |      |
| m. Maintenance expenses  |      |      |
| 3. Depreciation  |      |      |
| a. System assets   |      |      |
| b. Plant and equipment   |      |      |
| 4. Miscellaneous   |      |      |
| a. Interest expenses   |      |      |
| b. Revaluation decrements  |      |      |
| c. Other expenses  |      |      |
| d. Impairment of system assets   |      |      |
| e. Impairment of plant and equipment                                       |      |      |
| f. Aboriginal Communities Water and Sewerage Program                       |      |      |
| 5. <b>Total expenses</b>   |      |      |
| <b>Income</b>  |      |      |
| 6. Residential charges (including rates)                                   |      |      |
| 7. Non-residential charges   |      |      |
| a. Access (including rates)  |      |      |
| b. Usage charges   |      |      |
| 8. Trade Waste Charges   |      |      |
| a. Annual fees   |      |      |
| b. Usage fees  |      |      |
| c. Excess mass charges   |      |      |
| d. Re-inspection fees  |      |      |
| 9. Extra charges   |      |      |
| 10. Interest income  |      |      |
| 11. Other income   |      |      |
| 11a. Aboriginal Communities Water and Sewerage Program                     |      |      |
| 12. Grants   |      |      |
| a. Grants for acquisition of assets  |      |      |
| b. Grants for pensioner rebates  |      |      |
| c. Other grants  |      |      |

## NSW Council

### Special Schedule No. 5 (continued) Sewerage Income Statement (Gross including Internal Transactions) as at 30 June 2015 \$'000

2015

2014

#### A Expenses and Income (continued)

- 13. Contributions
  - a. Developer charges
  - b. Developer provided assets
  - c. Other contributions
- 14. **Total income**
- 15. Gain or loss on disposal of assets
- 16. Operating result
- 16a. **Operating result** (less grants for acquisition of assets)

#### B Capital transactions

##### Non-operating expenditures

- 17. Acquisition of Fixed Assets
  - a. New assets for Improved Standards
  - b. New assets for Growth
  - c. Renewals
  - d. Plant and equipment
- 18. Repayment of debt
  - a. Loans
  - b. Advances
  - c. Finance leases
- 19. Transfer to sinking fund

#### 20. Totals

##### Non-operating funds employed

- 21. Proceeds from disposal of assets
- 22. Borrowing utilised
  - a. Loans
  - b. Advances
  - c. Finance leases
- 23. Transfer from sinking fund

#### 24. Totals

#### C Rates and charges

- 25. Number of assessments
  - a. Residential (occupied)
  - b. Residential (unoccupied ie vacant lot)
  - c. Non-residential (occupied)
  - d. Non-residential (unoccupied ie vacant lot)
- 26. Number of ETs for which developer charges were received
- 27. Total amount of pensioner rebates

ET

\$

## NSW Council

### Special Schedule No. 5 (continued)

#### Sewerage – Cross-subsidies

as at 30 June 2015

\$'000

|  | Yes                  | No                   | Amount |
|--|----------------------|----------------------|--------|
| <b>D Best practice annual charges and developer charges<sup>#</sup></b>  |                      |                      |        |
| <b>28. Annual charges</b>  |                      |                      |        |
| a. Does Council have best-practice sewerage annual charges, usage charges and trade waste fees and charges*?   | <input type="text"/> | <input type="text"/> |        |
| If Yes, go to 29a.   |                      |                      |        |
| If No, please report if council has removed <b>land value</b> from access charges (ie rates)?  | <input type="text"/> | <input type="text"/> |        |
| <p>* Such charges for both residential customers and non-residential customers comply with sections 4.2 and 4.3 of <i>Water Supply, Sewerage and Trade Waste Pricing Guidelines</i>, NSW Office of Water, December, 2002. Such charges do not involve significant cross-subsidies.</p> |                      |                      |        |
| b. Cross-subsidy <b>to</b> non-residential customers (page 45 of Guidelines)   |                      |                      |        |
| c. Cross-subsidy <b>to</b> trade waste discharges (page 46 of Guidelines)  |                      |                      |        |
| <b>29. Developer charges</b>   |                      |                      |        |
| a. Has council completed a sewerage Development Servicing** Plan?  | <input type="text"/> | <input type="text"/> |        |
| b. Total cross-subsidy in sewerage developer charges for 2014/15 (page 47 of Guidelines)   |                      |                      |        |
| <p>** In accordance with page 9 of <i>Developer Charges Guidelines for Water Supply, Sewerage and Stormwater</i>, NSW Office of Water, December, 2002.</p>   |                      |                      |        |
| <b>30. Disclosure of cross-subsidies</b>   |                      |                      |        |
| <b>Total of cross-subsidies (28b +28c + 29b)</b>   |                      |                      |        |

# Councils which have not yet implemented best practice sewerage pricing and liquid trade waste pricing should disclose cross-subsidies in items 28b and 28c above.

However, disclosure of cross-subsidies is **not** required where a Council has implemented best practice sewerage and liquid trade waste pricing and is phasing in such pricing over a period of three years.



## NSW Council

### Special Schedule No. 6 Sewerage service – Statement of Financial Position (Gross including Internal Transactions) as at 30 June 2015 \$'000

|  | Current | Non current | Total |
|--|---------|-------------|-------|
| <b>Assets</b>  |         |             |       |
| 31. Cash and investments                                   |         |             |       |
| a. Developer charges                                       |         |             |       |
| b. Special purpose grants                                  |         |             |       |
| c. Accrued leave   |         |             |       |
| d. Unexpended loans  |         |             |       |
| e. Sinking fund  |         |             |       |
| f. Other   |         |             |       |
| 32. Receivables  |         |             |       |
| a. Specific purpose grants                                 |         |             |       |
| b. Rates and charges                                       |         |             |       |
| c. User charges  |         |             |       |
| d. Other   |         |             |       |
| 33. Inventories  |         |             |       |
| 34. Property, plant and equipment                          |         |             |       |
| a. System assets   |         |             |       |
| b. Plant and equipment                                     |         |             |       |
| 35. Other assets   |         |             |       |
| 36. <b>Total assets</b>                                    |         |             |       |
| <b>Liabilities</b>   |         |             |       |
| 37. Bank overdraft   |         |             |       |
| 38. Creditors  |         |             |       |
| 39. Borrowings   |         |             |       |
| a. Loans   |         |             |       |
| b. Advances  |         |             |       |
| c. Finance leases  |         |             |       |
| 40. Provisions   |         |             |       |
| a. Tax equivalents   |         |             |       |
| b. Dividend  |         |             |       |
| c. Other   |         |             |       |
| 41. <b>Total liabilities</b>                               |         |             |       |
| 42. <b>Net assets committed</b>                            |         |             |       |
| <b>Equity</b>  |         |             |       |
| 43. Accumulated surplus                                    |         |             |       |
| 44. Asset revaluation reserve                              |         |             |       |
| 45. <b>Total equity</b>                                    |         |             |       |
| <b>Note to system assets:</b>                              |         |             |       |
| 46. Current replacement cost of system assets              |         |             |       |
| 47. Accumulated current cost depreciation of system assets |         |             |       |
| 48. Written down current cost of system assets             |         |             |       |

## Notes to Special Schedules 3 and 5

**Administration<sup>(1)</sup>** (item 1a of Special Schedules 3 and 5) comprises the following:

- Administration staff:
  - Salaries and allowance
  - Travelling expenses
  - Accrual of leave entitlements
  - Employment overheads.
- Meter reading.
- Bad and doubtful debts.
- Other administrative/corporate support services.

**Engineering and supervision<sup>(1)</sup>** (item 1b of Special Schedules 3 and 5) comprises the following:

- Engineering staff:
  - Salaries and allowance
  - Travelling expenses
  - Accrual of leave entitlements
  - Employment overheads.
- Other technical and supervision staff:
  - Salaries and allowance
  - Travelling expenses
  - Accrual of leave entitlements
  - Employment overheads.

**Operation expenses** (item 2 of Special Schedules 3 and 5) comprise the day to day operational expenses excluding maintenance expenses.

**Maintenance expenses** (item 2 of Special Schedules 3 and 5) comprise the day to day repair and maintenance expenses. (Refer to Section 5 of the Local Government Asset Accounting Manual regarding capitalisation principles and the distinction between capital and maintenance expenditure).

**Other expenses** (item 4c of Special Schedules 3 and 5) include all expenses not recorded elsewhere.

**Impairment losses** (items 4d and 4e of Special Schedules 3 and 5) are to be used when the carrying amount of an asset exceeds its recoverable amount (refer to page D-31).

**Aboriginal Communities Water and Sewerage Program** (item 4f of Special Schedules 3 and 5) is to be used when operation and maintenance work has been undertaken on behalf of the Aboriginal Communities Water and Sewerage Program. Similarly, income for item 11a of Special Schedule 3 and item 12a of Special Schedule 5 are for services provided to the Aboriginal Communities Water and Sewerage Program and is not part of Council's water supply and sewerage revenue.

**Revaluation decrements** (item 4b of Special Schedules 3 and 5) is to be used when infrastructure assets have decreased in fair value.

**Residential charges<sup>(2)</sup>** (items 6a, 6b and item 6 of Special Schedules 3 and 5 respectively) include all income from residential charges. Item 6 of Schedule 3 should be separated into 6a Access Charges (including rates if applicable) and 6b User Charges. Exclude non-residential charges.

**Non-residential charges<sup>(2)</sup>** (items 7a, 7b of Special Schedules 3 and 5) include all income from non-residential charges separated into 7a Access Charges (including rates if applicable) and 7b User Charges. Exclude residential charges.

**Trade waste charges** (item 8 of Special Schedule 5) include all income from trade waste charges separated into 8a Annual Fees, 8b Usage Charges, 8c Excess Mass Charges and 8d Re-inspection Fees.

**Other income** (items 10 and 11 of Special Schedules 3 and 5 respectively) include all income not recorded elsewhere.

**Other contributions** (items 12c and 13c of Special Schedules 3 and 5 respectively) include capital contributions for water supply or sewerage services received by Council under Section 565 of the Local Government Act.

### Notes:

- (1) Administration and engineering costs for the development of capital works projects should be reported as part of the capital cost of the project and not as part of the recurrent expenditure (ie. in item 16 for water supply and item 17 for sewerage, and **not** in items 1a and 1b).
- (2) To enable accurate reporting of **residential revenue from usage charges**, it is essential for councils to accurately separate their residential (item 6) and non-residential (item 7) charges.

## NSW Council Special Schedule No. 7: Report on Infrastructure Assets as at 30 June 2015

| Asset class          | Asset category                          | Estimated cost to bring to a satisfactory standard<br>\$'000 | Required annual maintenance<br>\$'000 | 2014/15 Actual maintenance<br>\$'000 | Written Down Value (WDV) | Assets in Condition as a % of WDV* |   |   |   |   |
|----------------------|---|--|---------------------------------------|--------------------------------------|--------------------------|------------------------------------|---|---|---|---|
|                      |   |  |                                       |                                      |                          | 1                                  | 2 | 3 | 4 | 5 |
| Buildings            | Council Offices/ Administration Centres |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Council Works Depot                     |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Council Public Halls                    |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Libraries                               |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Cultural Facilities                     |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Other Buildings                         |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Specialised Buildings                   |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Sub total                               |  |                                       |                                      |                          |                                    |   |   |   |   |
| Other Structures     | Other Structures                        |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Sub total                               |  |                                       |                                      |                          |                                    |   |   |   |   |
| Roads                | Sealed Roads Surface                    |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Sealed Roads Structure                  |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Unsealed Roads                          |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Bridges                                 |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Footpaths                               |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Cycle ways                              |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Kerb and Gutter                         |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Other Road Assets                       |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Sub total                               |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      |   |  |                                       |                                      |                          |                                    |   |   |   |   |
| Water Supply Network | Dams/Weirs                              |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Mains                                   |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Reservoirs                              |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Pumping Station/s                       |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Treatment                               |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Buildings                               |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Other                                   |  |                                       |                                      |                          |                                    |   |   |   |   |
|                      | Sub total                               |  |                                       |                                      |                          |                                    |   |   |   |   |



## NSW Council Special Schedule No. 7: Report on Infrastructure Assets as at 30 June 2015 (continued)

| Asset class                    | Asset category                       | Estimated cost to bring to a satisfactory standard | Required annual maintenance | 2014/15 Actual maintenance | Written Down Value (WDV) | Assets in Condition as a % of WDV* |   |   |   |   |
|--------------------------------|--------------------------------------|--|-----------------------------|----------------------------|--------------------------|------------------------------------|---|---|---|---|
|                                |                                      |  |                             |                            |                          | 1                                  | 2 | 3 | 4 | 5 |
| Sewerage Network               | Mains                                | \$'000   | \$'000                      | \$'000                     | \$                       |                                    |   |   |   |   |
|                                | Pumping Station/s                    |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Treatment                            |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Buildings                            |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Other                                |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Sub total                            |  |                             |                            |                          |                                    |   |   |   |   |
| Stormwater Drainage            | Retarding Basins                     |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Outfalls                             |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Stormwater Conduits                  |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Inlet and Junction Pits              |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Head Walls                           |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Outfall Structures                   |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Stormwater Converters                |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Other                                |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Sub total                            |  |                             |                            |                          |                                    |   |   |   |   |
| Open Space/Recreational Assets | Swimming pools                       |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Other Open Space/Recreational Assets |  |                             |                            |                          |                                    |   |   |   |   |
| Other Infrastructure Assets    |                                      |  |                             |                            |                          |                                    |   |   |   |   |
|                                | Sub total                            |  |                             |                            |                          |                                    |   |   |   |   |
| <b>Total classes</b>           | <b>Total – all assets</b>            |  |                             |                            |                          |                                    |   |   |   |   |

\* In accordance with Note 9.

Note:- Written Down Value must be disclosed

### Infrastructure Asset Condition Assessment

| Level | Condition | Description                           |
|-------|-----------|---------------------------------------|
| 1     | Excellent | No work required (normal maintenance) |
| 2     | Good      | Only minor maintenance work required  |
| 3     | Average   | Maintenance work required             |
| 4     | Poor      | Renewal required                      |
| 5     | Very Poor | Urgent renewal/upgrading required     |

## NSW Council

### Special Schedule No. 7: Report on Infrastructure Assets as at 30 June 2015

#### Infrastructure Asset Performance Indicators – Consolidated

| \$'000   | Amounts   | Current<br>year<br>indicators | 2014 | 2013 |
|--|-----------|-------------------------------|------|------|
| <b>Building and infrastructure renewals ratio</b>  |           |                               |      |      |
| <u>Asset renewals (building, infrastructure and other structures)</u>                                  | \$ _____. |                               |      |      |
| Depreciation, amortisation and impairment<br>(building, infrastructure and other structures)           | \$ _____. |                               |      |      |
| <b>Infrastructure backlog</b>  |           |                               |      |      |
| <u>Estimated cost to bring assets to a satisfactory condition</u>                                      | \$ _____. |                               |      |      |
| Total value * of infrastructure, building, other structures<br>and depreciable land improvement assets | \$ _____. |                               |      |      |
| <b>Asset maintenance ratio</b>   |           |                               |      |      |
| <u>Actual asset maintenance</u>  | \$ _____. |                               |      |      |
| Required asset maintenance   | \$ _____. |                               |      |      |
| <b>Capital expenditure ratio</b>   |           |                               |      |      |
| <u>Annual capital expenditure</u>  | \$ _____. |                               |      |      |
| Annual depreciation  | \$ _____. |                               |      |      |

#### Infrastructure Asset Performance Indicators – General, Water & Sewer Funds

| Current year \$'000   | General | Water | Sewer |
|---|---------|-------|-------|
| <b>Building and infrastructure renewals ratio</b>   |         |       |       |
| <u>Asset renewals (building, infrastructure and other structures)</u>                                 |         |       |       |
| Depreciation, amortisation and impairment<br>(building, infrastructure and other structures)          |         |       |       |
| <b>Infrastructure backlog</b>   |         |       |       |
| <u>Estimated cost to bring assets to a satisfactory condition</u>                                     |         |       |       |
| Total value* of infrastructure, building, other structures and<br>depreciable land improvement assets |         |       |       |
| <b>Asset maintenance ratio</b>  |         |       |       |
| <u>Actual asset maintenance</u>   |         |       |       |
| Required asset maintenance  |         |       |       |
| <b>Capital expenditure ratio</b>  |         |       |       |
| <u>Annual capital expenditure</u>   |         |       |       |
| Annual depreciation   |         |       |       |

\*Written down value

## Commentary – Report on Infrastructure Assets

The Report on Infrastructure Assets provides information on a council's assets in addition to that contained in Note 9 Infrastructure, Property, Plant and Equipment. The nature of the information in the Report on Infrastructure Assets is related to the condition, maintenance and renewal of infrastructure assets.

### Asset Condition

Asset condition assessment is the process of continuous or periodic inspection, assessment, measurement and interpretation of the data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Councils are strongly encouraged to use the asset condition rankings as set out in the Asset Condition Assessment table in the Integrated Planning and Reporting Manual for local government in NSW. Asset conditions are assessed using a scale of one to five. Assets in condition one are considered to be excellent and that there is no work required (other than normal maintenance) while assets in condition five are considered to be very poor with urgent renewal or upgrading being required. Asset condition should be based on up to date asset condition assessments rather than an engineering estimates.

**WDV** is the written down value of the assets. The WDV \$ column which the condition assessments are to be made against is mandatory & cannot be changed to any other "base" figure. Should a Council want to publish condition assessments against "GBV \$" then they should publish a second SS7 within the Special Schedules.

**Estimated cost to bring to a satisfactory standard (BTS).** Satisfactory is defined as "*satisfying expectations or needs, leaving no room for complaint, causing satisfaction, adequate*"<sup>1</sup>. The estimated cost to bring assets to a satisfactory standard is the amount of money that is required to be spent on an asset to ensure that it is in a satisfactory standard. This should not include any planned enhancements.

Unless Council has undertaken consultation with their community and has agreed to a level of service from councils assets the BTS should be measured against the second condition rating of Good as stated in the Integrated Planning and Reporting Manual for local government in NSW.

**Renewal** is defined by the IIMM as "works to upgrade, refurbish or replace existing facilities with facilities of equivalent capacity or performance capability".

**Enhancement** means to "heighten, intensify or improve the facilities".

**Required annual maintenance** is "what should be spent to maintain assets in a satisfactory standard".

### Actual maintenance

Actual maintenance, previously referred to as current annual maintenance is what has been spent in the current year to maintain the assets (This figure should be sourced from Note 4). This may be higher or lower than the required annual maintenance due to the timing of when the maintenance actually occurs.

For further information, councils should consult the Integrated Planning and Reporting Guidelines and Manual for local government in NSW located on the Office of Local Government's website ([www.olg.nsw.gov.au](http://www.olg.nsw.gov.au)).

### Asset Classes

It should be noted that within the Buildings asset class 'Other Buildings' Category may include assets such as childcare centres, aged care facilities and multi-purpose centres for example. Cultural Facilities may include assets such as museums, art galleries and entertainment centres. 'Other Structures' is designed for the following types of infrastructure assets: statues, fences, monuments, clock towers and so on. 'Open Space/Recreational Assets' may include assets such as swimming pools (but not including buildings, plant & equipment, car parks etc. that are associated with the swimming pool), playground equipment, BBQ's and outdoor fitness facilities. 'Other infrastructure' may include jetties, boat ramps, sea/rock/retaining walls etc. The Asset Classes & Asset Categories as listed in SS7 are MANDATORY. If Councils want to add more line items to SS7, then they must be sub-categories (or individual assets) of the listed Asset Categories.

### Infrastructure Asset Performance Indicators.

The Office of Local Government requires a minimum number of prescribed indicators in relation to infrastructure asset management, to be presented as follows:

#### 1. Building and infrastructure renewal ratio

Purpose:- To assess the rate at which these assets are being renewed against the rate at which they are depreciating. The benchmark is greater than 100%.

Asset renewals (building, infrastructure and other structures)

Depreciation, amortisation and impairment (building, infrastructure and other structures)

(Expressed as a ratio)

#### 2. Infrastructure backlog ratio

Purpose:- This ratio shows what proportion the backlog is against the total value of a Council's infrastructure. The benchmark is less than 2%.

Estimated cost to bring assets to a satisfactory condition

Total value\* of infrastructure, building, other structures and depreciable land improvement assets



### 3. Asset maintenance ratio

Purpose:- This ratio compares actual versus required annual asset maintenance. A ratio of above 1.0 indicates that the Council is investing enough funds within the year to stop the Infrastructure Backlog from growing. The benchmark is greater than 1.0.

Actual asset maintenance

Required asset maintenance

### 4. Capital expenditure ratio

Purpose:- This indicates the extent to which a Council is forecasting to expand its asset base with capital expenditure spent on both new assets, and replacement and renewal of existing assets. The benchmark is greater than 1.1. The calculation is based on Note 9 and the balance sheet i.e. building, infrastructure and other structures additions less WDV of disposals over annual depreciation.

Annual capital expenditure

Annual depreciation

## Infrastructure Asset Performance Indicators by Fund

General Fund refers to all Council activities except Water and Sewer. Where Councils do not have Water and Sewer Funds this is not required.

1. The Australian Concise Oxford Dictionary of Current English \* *Written down value*

## Auditing Infrastructure Asset Information

The Local Government Infrastructure Audit undertaken by the Office of Local Government recommended that:

- *“clearly defined and specific asset management measurement parameters to be developed with the local government sector”* and for
- *“aspects of asset management to be subjected to an audit. Audit parameters to be developed to ensure a level of assurance that asset management information is reliable”*

A commitment was made during the release of the Local Government Code of Accounting Practice and Financial Reporting Code update 22 that the infrastructure asset information of councils would be audited in 2015.

A three stage approach has been developed to meet the requirement of auditing infrastructure asset information. The approach has been developed taking into account the requirements of councils in the Fit for the Future program, the need for a review of Special Schedule 7 to occur and the importance of infrastructure assets in the delivery of services and making sure the auditing process is appropriate.

### Stage one

Local Government auditors will be required to check the systems and processes councils have in place for capturing, recording and reporting councils' asset information. The purpose of this is to test how prepared councils are for an audit.

The Office of Local Government will issue a circular to all councils and auditors with the format and a list of questions that should be used to inform the auditor, council and the OLG of how well prepared councils are for an audit. The councils will also be able to use this document to assess if there are any areas that need improving. Stage one will be conducted during the audit of the 2014/15 financial reports, that is, July to October 2015.

### Stage two

This stage involves reviewing the Report on Infrastructure Assets (SS7) and also the information contained within the Integrated Planning and Reporting Manual and Guidelines.

It has been recognised by the industry and the Office that more information needs to be available to councils related to SS7, together with a more consistent approach to calculating the cost to bring assets to a satisfactory standard. The plan for this stage is to prepare an updated SS7 and to release it to the industry for comment in the second half of 2015.

A review of the IP&R asset management information should also take place at the same time to ensure there is consistency between the two.

### Stage three

Stage three involves auditing the information contained within SS7. The OLG will work with the NSW Audit Office and the LG Auditor's Association of NSW to develop an audit framework.

The audit will be conducted on the information reported as at 30 June 2016.

**Note 2 Water Supply Business best practice management disclosure requirements****2015****1. Calculation and Payment of Tax-Equivalents**

|       |  |    |  |
|-------|--|----|--|
| (i)   | Calculated Tax Equivalents                                   | \$ |  |
| (ii)  | No of assessments multiplied by \$3/assessment               | \$ |  |
| (iii) | Amounts payable for Tax Equivalents (lesser of (i) and (ii)) | \$ |  |
| (iv)  | Tax Equivalents paid   | \$ |  |

**2. Dividend from Surplus**

|       |   |    |  |
|-------|---|----|--|
| (i)   | 50% of Surplus before Dividends<br>(Calculated in accordance with Best Practice Management for Water Supply and Sewerage guidelines.) | \$ |  |
| (ii)  | No of assessments multiplied by \$30/assessment, less tax equivalent charges/assessment   | \$ |  |
| (iii) | Cumulative Surplus before Dividends for 3 years to 30 June 2015, less cumulative dividends paid for 2 years to 30 June 2014           | \$ |  |
| (iv)  | Maximum Dividend from Surplus (least of (i), (ii) and (iii))  | \$ |  |
| (v)   | Dividend paid from Surplus  | \$ |  |

**3. Required Outcomes for 6 Criteria**

|       |   |        |  |
|-------|---|--------|--|
| (i)   | Complete current Strategic Business Plan (including Financial Plan)   | Yes/No |  |
| (ii)  | Full cost-recovery, without significant cross subsidies<br>(Item 2(a) in Table 1 on page 22 of Best Practice Management Guidelines) | Yes/No |  |
|       | Complying charges (Item 2(b) in Table 1)  | Yes/No |  |
|       | DSP with Commercial Developer Charges (Item 2(e) in Table 1)  | Yes/No |  |
|       | If Dual Water Supplies, Complying Charges (Item 2(g) in Table 1)  | Yes/No |  |
| (iii) | Sound Water Conservation & Demand Management implemented  | Yes/No |  |
| (iv)  | Sound Drought Management implemented  | Yes/No |  |
| (v)   | Complete Performance Reporting (by 15 September each year)  | Yes/No |  |
| (vi)  | a. Complete Integrated Water Cycle Management Evaluation  | Yes/No |  |
|       | b. Complete and implement Integrated Water Cycle Management Strategy  | Yes/No |  |

**National Water Initiative (NWI) Financial Performance Indicators**

|         |   |           |  |
|---------|---|-----------|--|
| NWI F1  | Total Revenue (Water)<br>= Total income (w13)<br>- Grants for acquisition of assets (w11a) - Interest income (w9) - Aboriginal Communities W&S Program Income (w10a)  | \$ ('000) |  |
| NWI F4  | Revenue from Residential Usage Charges (Water)<br>= Income from residential usage charges (w6b) x 100<br>/<br>(Income from residential usage charges (w6a)<br>+ Income from residential access charges (w6b))   | %         |  |
| NWI F9  | Written Down Replacement Cost of Fixed Assets (Water)<br>= Written down current cost of system assets (w47)   | \$ ('000) |  |
| NWI F11 | Operating Cost (OMA) (Water)<br>= Management expenses (w1) + Operation and maintenance expenses (w2)  | \$ ('000) |  |
| NWI F14 | Capital Expenditure (Water)<br>= Acquisition of fixed assets (w16)  | \$ ('000) |  |
| NWI F17 | Economic Real Rate of Return (Water)<br>= (Total income (w13) - Interest income (w9) - Grants for acquisition of assets (w11a)<br>- Operating cost (NWI F11) - Current cost depreciation (w3)) x 100<br>/<br>(Written down current cost of system assets (w47) + Plant and equipment (w33b)). | %         |  |
| NWI F26 | Capital Works Grants (Water)<br>= Grants for acquisition of assets (w11a)   | \$ ('000) |  |

- Notes:
- References to w (eg. w12) refer to item numbers in Special Schedules Nos. 3 and 4 of each Council's Annual Financial Statements.
  - The NWI performance indicators are based on the National Performance Framework handbook for Urban Performance Reporting Indicators and Definitions.  
The NWI indicators are to be calculated using the formulae shown above.

### Note 3 Sewerage Business best practice management disclosure requirements

|   |   | 2015      |
|---|---|-----------|
| <b>1. Calculation and Payment of Tax-Equivalents</b>                    |   |           |
| (i)   | Calculated Tax Equivalents  | \$        |
| (ii)  | No of assessments multiplied by \$3/assessment  | \$        |
| (iii)   | Amounts payable for Tax Equivalents (lesser of (i) and (ii))  | \$        |
| (iv)  | Tax Equivalents paid  | \$        |
| <b>2. Dividend from Surplus</b>   |   |           |
| (i)   | 50% of Surplus before Dividends<br>(Calculated in accordance with Best Practice Management for Water Supply and Sewerage guidelines.)   | \$        |
| (ii)  | No of assessments multiplied by \$30/assessment, less tax equivalent charges/<br>Assessment   | \$        |
| (iii)   | Cumulative Surplus before Dividends for 3 years to 30 June 2015, less cumulative dividends paid<br>for 2 years to 30 June 2014  | \$        |
| (iv)  | Maximum Dividend from Surplus (least of (i), (ii) and (iii))  | \$        |
| (v)   | Dividend paid from Surplus  | \$        |
| <b>3. Required Outcomes for 4 Criteria</b>                              |   |           |
| (i)   | Complete current Strategic Business Plan (including Financial Plan)   | Yes/No    |
| (ii)  | Pricing with full cost-recovery, without significant cross subsidies<br>(Item 2(a) in Table 1 on page 22 of Best Practice guidelines)   | Yes/No    |
|   | Complying charges (a) Residential (Item 2(c) in Table 1)  | Yes/No    |
|   | (b) Non-Residential (Item 2(c) in Table 1)  | Yes/No    |
|   | (c) Trade Waste (Item 2(d) in Table 1)  | Yes/No    |
|   | DSP with Commercial Developer Charges (Item 2(e) in Table 1)  | Yes/No    |
|   | Liquid Trade Waste Approvals & Policy (Item 2(f) in Table 1)  | Yes/No    |
| (iii)   | Complete Performance Reporting Form (by 15 September each year)   | Yes/No    |
| (iv)  | a. Complete Integrated Water Cycle Management Evaluation  | Yes/No    |
|   | b. Complete and implement Integrated Water Cycle Management Strategy  | Yes/No    |
| <b>National Water Initiative (NWI) Financial Performance Indicators</b> |   |           |
| NWI F2  | Total Revenue (Sewerage)<br>= Total income (s14)<br>- Grants for acquisition of assets (s12a) - Interest income (s10) - Aboriginal Communities W&S Program Income (w10a)  | \$ ('000) |
| NWI F10   | Written Down Replacement Cost of Fixed Assets (Sewerage)<br>= Written down current cost of system assets (s48)  | \$ ('000) |
| NWI F12   | Operating cost (Sewerage)<br>= Management expenses (s1) + Operation and maintenance expenses (s2)   | \$ ('000) |
| NWI F15   | Capital Expenditure (Sewerage)<br>= Acquisition of fixed assets (s17)   | \$ ('000) |
| NWI F18   | Economic Real Rate of Return (Sewerage)<br>= ((Total income (s14) - Interest income (s10) - Grants for acquisition of assets (s12a) - Operating cost (NWI F12) - Current cost depreciation (s3)) x 100 / (Written down current cost (WDCC) of system assets (s48) + Plant and equipment (s34b))   | %         |
| NWI F27   | Capital Works Grants (Sewerage)<br>= Grants for acquisition of assets (s12a)  | \$ ('000) |
| NWI F3  | Total Income (Water and Sewerage)<br>= Total income (w13+s14) + Gain/loss on disposal of assets (w14+s15)<br>- Grants for acquisition of assets (w11a+s12a) - Interest income (w9+s10)  | \$ ('000) |
| NWI F8  | Revenue from Community Service Obligations (Water and Sewerage)<br>= Community service obligations (NWI F25) x 100 / Total income (NWI F3)  | %         |
| NWI F16   | Capital Expenditure (Water and Sewerage)<br>= Acquisition of fixed assets (w16 + s17)   | \$ ('000) |
| NWI F19   | Economic Real Rate of Return (Water and Sewerage)<br>= (Total income (w13 + s14) - Interest income (w9 + s10) - Grants for acquisition of assets (w11a + s12a) - Operating cost (NWI F11 + NWI F12) - Current cost depreciation (w3 + s3)) x 100 / (Written down replacement cost of fixed assets (NWIF9 + NWIF10) + Plant and equipment (w33b + s34b))   | %         |
| NWI F20   | Dividend (Water and Sewerage)<br>= Dividend paid from surplus (2(v) of Note 2 + 2(v) of Note 3)   | \$ ('000) |
| NWIF21  | Dividend Payout Ratio (Water and Sewerage)<br>= Dividend (NWI F20) x 100 / Net profit after tax (NWI F24)   | %         |
| NWI F22   | Net Debt to Equity (Water and Sewerage)<br>= (Overdraft (w36 + s37) + Borrowings (w38 + s39) - Cash and investments (w30 + s31)) x 100 / (Total assets (w35 + s36) - Total liabilities (w40 + s41))   | %         |
| NWI F23   | Interest Cover (Water and Sewerage)<br>= EBIT / NI<br><b>Earnings before Interest and Tax (EBIT)</b> = Operating result (w15a+s16a) + Interest expense (w4a + s4a) - Interest income (w9 + s10) - Gain/loss on disposal of assets (w14 + s15) + Miscellaneous expenses (w4b + w4c + s4b + s4c)<br><b>Net Interest (NI)</b> = Interest expense (w4a+s4a) - Interest income (w9+s10)<br><b>Note:</b> If EBIT > 0 AND Net Interest <= 0 THEN Interest Cover is to be reported as ">100"<br>If EBIT < 0 THEN Interest Cover = 0 |           |
| NWI F24   | Net Profit After Tax (Water and Sewerage)<br>= (Surplus before dividends (w15a + s16a) - Tax paid (1(iv) of Note 2 + 1(iv) of Note 3))  | \$ ('000) |
| NWI F25   | Community Service Obligations (Water and Sewerage)<br>= Grants for pensioner rebates (w11b + s12b)  | \$ ('000) |

- Notes:
- References to s (eg s12) refer to item numbers in Special Schedules Nos. 5 and 6 of each Council's Annual Financial Statements.
  - The NWI performance indicators are based on the National Performance Framework handbook for Urban Performance Reporting Indicators and Definitions.  
The NWI indicators are to be calculated using the formulae shown above.



Formulae for calculation of performance indicators in tables 5 to 18

Formulae for calculation of performance indicators in table 5

| 5. 2014/15 NSW Water Utility Performance Summary |  |  |   |
|--|--|--|---|
| Column No.                                       | Performance Indicator  | Background to Formula  | Formula   |
| (1)  | Water Supply Connected Properties (No.)  | Total number of water supply connected properties (Residential plus Non-residential).  | From Col (20) Table 9                                 |
| (2)  | Total Urban Water Supplied (ML)  | Total annual water supplied (Potable plus Non-potable plus recycled. Excludes bulk water supplied). Where a Local Water Utility (LWU) has not reported the total water supplied, the previous year's value has been used and is shown in italics bold. | From Col (49) Table 10                                |
| (3)  | Residential Revenue from Usage Charges - Water Supply (% of residential bills) | Revenue from residential usage charges divided by total residential revenue (residential usage plus access charges including any rates).   | $W\_6b \times 100 \div [W\_6a + W\_6b]$               |
| (4)  | Typical Residential Bill - Water Supply (\$/assessment) (see note B)           | Calculated using the average residential water supplied for 2014/15 multiplied by the usage charges for 2014/15 plus the access charge for 2014/15.  | $Col (5) \times Col (14a) \div 100 + Col (2) Table 6$ |
| (5)  | Typical Residential Bill - Sewerage (\$/assessment) (see note B)               | Calculated using the access charge for 2014/15 plus, if council has residential sewer usage charges, the average residential water consumption for 2014/15 multiplied by the usage charges and usage factor for 2014/15.                               | $Col (1) + Col (1a) Table 7$                          |
| (6)  | Typical Residential Bill - Water Supply & Sewerage (\$/assessment)             | Sum of water supply and sewerage Typical Residential Bills.  | $Col (4) Table 5 + Col (5) Table 5$                   |
| (7)  | Typical Developer Charge - Water Supply & Sewerage (\$/ET)                     | Sum of water and sewerage Typical Developer Charges.   | $Col (7) Table 6 + Col (7) Table 7$                   |
| (8)  | Current Replacement Cost per Assessment - W&S (\$/assessment)                  | The value of the infrastructure assets divided by the number of assessments.   | $Col (62) Table 11 + Col (47) Table 16$               |
| (9)  | E. coli Compliance Achieved?   | E. coli water quality compliance (ADWG 2011) achieved - Yes or % if No. Number of samples tested that meet the water quality requirements divided by the total number of samples tested.   | From Col (71) Table 12                                |
| (10)   | % Population with E. coli Compliance   | From population served and compliance achieved by each zone.   | From Col (71c) Table 12                               |
| (11)   | Chemical Compliance Achieved?  | Chemical water quality compliance (ADWG 2011) achieved - Yes or % if No.   | From Col (70) Table 12                                |
| (12)   | % of Population with Chemical Compliance                                       | From population served and compliance achieved by each zone.   | From Col (70c) Table 12                               |
| (13)   | Water Quality Complaints (per 1000 properties)                                 | Complaints are any expression of customer dissatisfaction reported in person, by phone, fax, letter or email. Water quality complaints are reported under the relevant source water treatment works.   | From Col (73) Table 12                                |
| (14)   | Average Duration of an Unplanned Interruption (mins) - Water Supply            | Sum of total minutes of interruption divided by the total number of interruptions.   | From Col (78) Table 12                                |
| (15)   | Water Main Breaks (per 100km of main)  | Number of main breaks per 100km of main. A main break is where the water main has to be shut down. Excludes service connection breaks.   | From Col (42) Table 10                                |
| (16)   | Total Water Supply and Sewerage Complaints (no.)                               | Sum of water supply complaints (service, billing, water quality, other) and sewerage complaints (sewage chokes, service, billing, odour).  | $WB102 + SB40$  |
| (17)   | Average Annual Residential Water Supplied (kL/connected property)              | Average annual residential consumption (potable + non potable).  | From Col (56) Table 10                                |
| (18)   | Real Losses (L/connection/d) - Water Supply                                    | Real loss or leakage L per day per connection.   | From Col (41) Table 10                                |
| (19)   | % Sewage Treated that was Compliant  | The number of scheduled samples that complied in the reporting period divided by the number of scheduled samples in the reporting period.  | From Col (33a) Table 15                               |
| (20)   | Breaks and Chokes - Sewerage (No. per 100km of main)                           | Breaks and chokes are partial or total blockages resulting in an interruption to sewerage services or overflows at gully traps. Blockages in risers and sidelines are excluded.  | $SB64 \div (SB9 \div 100)$                            |
| (21)   | Recycled Water (% of effluent)   | Percent of Effluent Recycled   | From Col (41c) Table 15                               |
| (22)   | Recycled Water (Total ML)  | Total Effluent Recycled  | From Col (41a) Table 15                               |
| (23)   | Total Revenue - W&S (\$M)  | Sum of water supply revenue and sewerage revenue.  | $[Col (57) Table 11 + Col (42) Table 16] \div 1000$   |
| (24)   | Net Debt to Equity - W&S (%)   | See Col (26) of Table 5A   | From Col (26) Table 5A                                |
| (25)   | Capital Expenditure - W&S (\$/prop)  | Assets, renewals, plant/equipment.   | From Col (24b) Table 5A                               |
| (26)   | Capital Expenditure - W&S (\$M)  | Assets, renewals, plant/equipment.   | $Col (31a) Table 9 + Col (13a) Table 14$              |
| (27)   | Economic Real Rate of Return - Water Supply (%)                                | See Col (12) of Table 6  | From Col (12) Table 6                                 |
| (28)   | Economic Real Rate of Return - Sewerage (%)                                    | See Col (11) of Table 7  | From Col (11) Table 7                                 |
| (29)   | Full Cost Recovery - Water Supply (N / Y* / Y)                                 | Achieved if either the economic real rate of return or return on assets is $\geq 0$ , or if a LWU has significantly increased its charges to recover its costs.  | From Col (14d) Table 6                                |
| (30)   | Full Cost Recovery - Sewerage (N / Y* / Y)                                     | Achieved if either the economic real rate of return or return on assets is $\geq 0$ , or if a LWU has significantly increased its charges to recover its costs.  | From Col (11a) Table 7                                |
| (31)   | OMA Cost - Water Supply (\$/connected property)                                | See Col (67) of Table 11   | From Col (67) Table 11                                |
| (32)   | OMA Cost - Sewerage (\$/connected property)                                    | See Col (52) of Table 16   | From Col (52) Table 16                                |
| (33)   | Best Practice Implementation - Water Supply and Sewerage (%)                   | Implementation of the 19 requirements of the Best-Practice Management Framework for Water Supply and Sewerage.   | From Col (7) Table 3                                  |
| (34)   | Strategic Business Plans Completed? (Yes/No)                                   | 30-year Strategic Business Plan and financial plan are soundly based and are less than 5 years old.  | From Col (1) Table 3                                  |

**Notes:**

A. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Similarly, references to S\_ (eg. S\_16) refer to each LWU's Special Schedules Nos 5 and 6. Note that dollar values in the Special Schedules are reported in '\$000 whereas the whole dollar value is used in these Tables and formulae.

B. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

C. References to WB and SB (eg. WB15, SB9) refer to questions in each LWU's Water Supply or Sewerage Performance Monitoring Database. Eg. refer to pages 213 and 227.

Formulae for calculation of performance indicators in table 5A

| 5A. 2014/15 NSW Water Utility Performance Summary |                                      |   |  |
|---|--------------------------------------|---|--|
| Column No.  | Performance Indicator                | Background to Formula   | Formula  |
| Water Supply & Sewerage                           |                                      |   |  |
| (23)  | Operating Cost (OMA) (\$/property)   | Total water supply and sewerage operation, maintenance and administration (OMA) costs (excluding cost of purchasing water) divided by number of connected properties. OMA includes engineering and supervision costs.   | Col (67) Table 11 + Col (52) Table 16  |
| (24)  | Income per Property (\$/property)    | Total income divided by total connected properties (water or sewerage)  | Col (24a) ÷ Col (20) Table 9   |
| (24a)   | Total Income (\$M)                   | Total income plus gain/loss on disposal of assets less grants for acquisition of assets less interest income.   | [(W_13 + W_14 - W_11a - W_9) + (S_14 + S_15 - S_12a - S_10)] ÷ 1,000,000   |
| (24b)   | Capital Expenditure (\$/property)    | Assets, Renewals, Plant/Equipment.  | (W_16 ÷ Col (20) Table 9) + (S_17 ÷ Col (3) Table 14)  |
| (24c)   | Return on Assets (%)                 | Total revenue less grants for acquisition of assets less total expenses plus revaluation decrements plus other expenses divided by written down replacement value of operational assets. Total revenue excludes gain/loss on disposal of assets. Operational assets include system assets plus plant and equipment.   | [(W_13 - W_11a - W_5 + W_4b + W_4c) + (S_14 - S_12a - S_5 + S_4b + S_4c)] x 100 ÷ (W_47 + W_33b + S_48 + S_34b)          |
| (25)  | Economic Real Rate of Return (%)     | Revenue from operations (water supply and sewerage) less operating expenses (OMA + current cost depreciation) divided by written down replacement value of water supply and sewerage operational assets. Revenue from operations excludes interest income, grants for acquisition of assets or gain/loss on disposal of assets. Operational assets include system assets and plant and equipment. | [(W_13 - W_9 - W_11a - W_1 - W_2 - W_3) + (S_14 - S_10 - S_12a - S_1 - S_2 - S_3)] x 100 ÷ (W_47 + W_33b + S_48 + S_34b) |
| (26)  | Net Debt to Equity - W&S (%)         | Net debt (water supply and sewerage) divided by equity (water supply and sewerage). Net debt is borrowings plus bank overdrafts less cash and investments. Equity is Total Assets less Total Liabilities.   | [(W_36 + W_38 - W_30) + (S_37 + S_39 - S_31)] x 100 ÷ (W_44 + S_45)  |
| (27)  | Interest Cover                       | Earnings before interest and tax (EBIT) for the whole water utility (water supply and sewerage) divided by net interest expense for the whole water utility (water supply and sewerage). The interest cover is nil for a loss making utility. Net interest expense is interest expenses less interest income and is zero for interest income greater than interest expense.                       | [(W_15a + W_4a - W_9 - W_14 + W_4b + W_4c) + (S_16a + S_4a - S_10 - S_15 + S_4b + S_4c)] ÷ (W_4a - W_9 + S_4a - S_10)    |
| (28)  | Dividend Payable (\$'000)            | Dividends paid, payable or proposed to be paid in relation to current year profit for the water and sewerage business for the whole water utility.  | From SPFR Notes 2 & 3  |
| (29)  | Dividend Payout Ratio (%)            | From SPFR Note 3  | (Dividend paid or payable or proposed) x 100 ÷ (Net profit after tax)  |
| (30)  | CSOs (\$'000)                        | Subsidy provided by government to allow for the provision of a service at less than the total cost. Eg. If legislation requires a utility to provide a \$100 reduction to the water bills for pensioners for which the government provides \$60, the CSO is \$60.   | From SPFR Note 3   |
| (31)  | % Revenue from CSOs                  | Revenue from CSOs divided by the total revenue (including CSOs).  | [Col (30) ÷ Col (24a) Table 5A] x 100  |
| (32)  | Net Profit After Tax (NPAT) (\$'000) | Surplus before dividends less tax paid.   | [(W_15a + S_16a) - Tax paid] ÷ 1000<br>From SPFR Notes 2 & 3   |
| (32a)   | NPAT Ratio                           | Net profit after tax divided by Total Income.   | Col (32) ÷ [Col (24a) Table 5A x 1000] x 100   |

- Notes:**
- A. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Similarly, references to S\_ (eg. S\_16) refer to each LWU's Special Schedules Nos 5 and 6. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- B. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.
- C. References to WB and SB (eg. WB15, SB9) refer to questions in each LWU's Water Supply or Sewerage Performance Monitoring Database. Eg. refer to pages 213 and 227.



Formulae for calculation of performance indicators in table 5B

| 5B. 2014/15 NSW Water Utility Performance Summary |  |  |                                  |
|---|--|--|----------------------------------|
| Column No.  | Performance Indicator  | Background to Formula  | Formula                          |
| Water Supply & Sewerage                           |  |  |                                  |
| (33)  | Billing Complaints (per 1000 properties)                             | Billing complaints for both water supply and sewerage businesses.  | (WB99 + SB37) ÷ Col (20) Table 9 |
| (34)  | % of calls answered by Operator within 30 seconds                    | Proportion of calls that, where the customer has selected a relevant operator option, are answered by an operator within 30 seconds.   | WB103                            |
| (35a)   | Greenhouse Gas Emissions - Water (tonnes CO2 per 1000 properties)    | The greenhouse gas emissions (CO <sub>2</sub> -equivalent) generated by the water utility, directly (scope 1) and indirectly (scope 2), through all its operations relating to water supply.   | WB148                            |
| (35b)   | Greenhouse Gas Emissions - Sewerage (tonnes CO2 per 1000 properties) | The greenhouse gas emissions (CO <sub>2</sub> -equivalent) generated by the water utility, directly (scope 1) and indirectly (scope 2), through all its operations relating to sewerage.   | SB80a                            |
| (35c)   | Greenhouse Gas Emissions - Other (tonnes CO2 per 1000 properties)    | This indicator is a balancing item, which reports the net greenhouse gas emissions generated by the water utility, directly (scope 1) and indirectly (scope 2) relating to other activities such as transport (vehicles) and office buildings. Scope 3 emissions are excluded. | WB148b + SB80b                   |
| (35d)   | Greenhouse Gas Emissions - Total (tonnes CO2 per 1000 properties)    | Total net greenhouse gas emissions from water, sewerage and other.   | WB148 + SB80a + WB148b + SB80b   |
| (36)  | Major Sources of Water   | The utility's major sources of water, including ground water in ML/d, surface water, bulk supply and the towns supplied to.  |                                  |
| (37)  | Storage Dams   | Major dams used to source water and their capacity.  |                                  |
| (38)  | Bulk Raw Water Supply  | Bulk raw water supplier.   |                                  |
| (39)  | >50% of Supply from Ground Water                                     | More than 50% of the utility's water is sourced from ground water.   |                                  |
| (40)  | No. Bores  | Bore holes connecting to an aquifer from which water is drawn.   | Col (29) Table 9                 |
| (41)  | Bulk Supplier (potable water)  | Bulk potable water supplier.   | WB51                             |

- Notes:**
- A. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Similarly, references to S\_ (eg. S\_16) refer to each LWU's Special Schedules Nos 5 and 6. Note that dollar values in the Special Schedules are reported in '\$000 whereas the whole dollar value is used in these Tables and formulae.
- B. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.
- C. References to WB and SB (eg. WB15, SB9) refer to questions in each LWU's Water Supply or Sewerage Performance Monitoring Database. Eg. refer to pages 213 and 227.



Formulae for calculation of performance indicators in table 5C

| 5C. Water Supply 2014/15 - Infrastructure Asset Condition and Performance |  |  |                                      |
|---|--|--|--------------------------------------|
| Column No.  | Performance Indicator  | Background to Formula  | Formula                              |
| (42)  | Written Down Value Current Replacement Cost per property (\$)                      | The written down value of the infrastructure assets divided by the number of connected properties.   | From Col (62a) Table 11.             |
| (43)  | Current Replacement Cost (CRC) of System Assets (\$'000)                           | The value of the infrastructure assets expressed in terms of how much it would cost to construct modern assets to provide the same function (ie. MEERA - Modern Engineering Equivalent Replacement Asset).   | Col (61) Table 11 x 1,000            |
| (44)  | Written Down Replacement Cost (\$'000)   | Written down replacement cost of system assets.  | Col (60) Table 11 x 1,000            |
| (45)  | Current Depreciation of System Assets (\$'000)                                     | Depreciation expense of system assets and plant and equipment.   | From Special Schedule 3: W_3a + W_3b |
| (46)  | Capital Expenditure (Total \$'000)   | Assets, renewals, plant/equipment.   | Col (31a) Table 9 x 1,000            |
| (47)  | Estimated Cost to Bring to a Satisfactory Standard (\$'000)                        | The amount of money that is required to be spent on an asset to ensure that it is in a satisfactory standard.  | From Special Schedule 7              |
| (48)  | Actual Annual Maintenance (\$'000)   | Amount spent in the current year to maintain the assets.   | From Special Schedule 7              |
| (49)  | Mains Maintenance Cost (\$'000/100km)  | Expenditure on maintenance of mains per 100km of main.   | From Col (48) Table 10               |
| (50)  | Rehabilitation of mains (km/100km)   | Length of mains rehabilitated per 100km of main.   | From Col (44) Table 10               |
| (51)  | Rehabilitation of service connections (%)  | Number of service connections rehabilitated as % of total.   | From Col (45) Table 10               |
| (52)  | Rehabilitation of water meters (%)   | Number of water meters rehabilitated as % of total.  | From Col (45a) Table 10              |
| (53)  | Asset Renewals (\$'000)  | Expenditure on renewals.   | From Special Schedule 3: W_16c       |
| (54)  | Asset Renewals (\$'000 per 100km of main)  | Expenditure on renewals per 100km of main.   | From Col (46) Table 10               |
| (55)  | Asset Renewals (% of CRC)  | Expenditure on renewals as percentage of Current Replacement Cost (CRC) of systems assets.   | From Col (47) Table 10               |
| (56)  | Assets in Condition as % of WDV  | Assets in condition one are considered to be excellent and that there is no work required (other than normal maintenance) while assets in condition five are considered to be very poor with urgent renewal or upgrading being required.   | From Special Schedule 7              |
| (57)  | Renewals Ratio (%)   | Asset renewals (building and infrastructure) divided by Depreciation, amortisation and impairment (building and infrastructure). (Expressed as a ratio).   | From Special Schedule 7              |
| (58)  | Backlog Ratio (%)  | Estimated cost to bring assets to a satisfactory condition divided by total written down value of infrastructure, building, other structures and depreciable land improvement assets.  | From Special Schedule 7              |
| (59)  | Asset Maintenance Ratio (%)  | Actual asset maintenance divided by Required asset maintenance.  | From Special Schedule 7              |
| (60)  | Capital Expenditure Ratio (%)  | Annual capital expenditure divided by Annual depreciation.   | From Special Schedule 7              |
| (61)  | Operating Cost OMA (\$/property)   | Total operation, maintenance and administration costs (plus proportion of bulk supplier OMA or purchase cost of water if no bulk supplier) divided by total number of connected properties.  | From Col (67) Table 11               |
| (62)  | Net Debt to Equity - W&S (%)   | Net debt (water supply and sewerage) divided by equity (water supply and sewerage). Net debt is borrowings plus bank overdrafts less cash and investments. Equity is Total Assets less Total Liabilities.  | From Col (26) Table 5A               |
| (63)  | Economic Real Rate of Return - Water Supply (%)                                    | Revenue from operations less operating expenses (OMA + current cost depreciation) divided by written down replacement value of operational assets. Revenue from operations excludes interest income and grants for acquisition of assets and gain/loss on disposal of assets. Operational assets include system assets plus plant and equipment. | From Col (12) Table 6                |
| (64)  | Main Breaks (per 100km of main)  | Number of main breaks per 100km of main. A main break is where the water main has to be shut down. Excludes service connection breaks.   | From Col (42) Table 10               |
| (65)  | Unplanned Interruptions to Supply (per 1000 properties)                            | Number of properties affected by unplanned interruptions to supply per 1000 properties. Includes each occurrence. Excludes breaks in service connections or instances of low pressure.   | From Col (43) Table 10               |
| (66)  | Real Losses (Leakage) (L/d/c)  | Real loss or leakage L per day per connection.   | From Col (41) Table 10               |
| (67)  | Water Quality Complaints (per 1000 properties)                                     | Complaints are any expression of customer dissatisfaction reported in person, by phone, fax, letter or email. Water quality complaints are reported under the relevant source water treatment works.   | From Col (73) Table 12               |
| (68)  | Water Service Complaints (per 1000 properties)                                     | Complaints are any expression of customer dissatisfaction reported in person, by phone, fax, letter or email.  | From Col (74) Table 12               |
| (69)  | % of Population with E. coli Compliance  | From population served and compliance achieved by each zone.   | From Col (71c) Table 12              |
| (70)  | Typical Residential Bill - Water Supply (\$/assessment)                            | Calculated using the average residential water supplied for 2014/15 multiplied by the usage charges for 2015/16 plus the access charge for 2015/16.  | From Col (8) Table 6                 |
| (70a)   | Drinking Water Management System (DWMS)? (Yes/No)                                  | May include HACCP, ISO 9001, WSAA ADWG Aquality assessment, ADWG Framework for Management of Drinking Water Quality.   | From Col (68a) Table 12              |
| (70b)   | No. of Water Treatment Operators Meeting National Certification Requirements (No.) | Operators with a Certificate III in Water Operations (Water Treatment) or equivalent; OR a NSW Office of Water Part 1 Certificate (Chemical Dosing Systems) or equivalent AND have completed chlorine safety training. Employed in operating a LWU treatment works or a chlorinator/aerator.   | From Appendix I: Col (1) + Col (2)   |
| (71)  | Best Practice Implementation - Water Supply (%)                                    | Implementation of the 10 requirements of the Best-Practice Management Framework for Water Supply.  | From Col (7) Table 3                 |
| (72)  | Strategic Business Plans Completed? (Yes/No)                                       | 30-year Strategic Business Plan and financial plan are soundly based and are less than 5 years old.  | From Col (1) Table 3                 |

**Notes:**

A. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.

B. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 5D

| 5D. Sewerage 2014/15 - Infrastructure Asset Condition and Performance |   |   |                                      |
|---|---|---|--------------------------------------|
| Column No.  | Performance Indicator   | Background to Formula   | Formula                              |
| (73)  | Written Down Value Current Replacement Cost per property (\$) | The written down value of the infrastructure assets divided by the number of connected properties.  | From Col (47a) Table 16.             |
| (74)  | Current Replacement Cost (CRC) of System Assets (\$'000)      | The value of the infrastructure assets expressed in terms of how much it would cost to construct modern assets to provide the same function (ie. MEERA - Modern Engineering Equivalent Replacement Asset).  | Col (46) Table 16 x 1,000            |
| (75)  | Written Down Replacement Cost (\$'000)                        | Written down replacement cost of system assets.   | Col (45) Table 16 x 1,000            |
| (76)  | Current Depreciation of System Assets (\$'000)                | Depreciation expense of system assets and plant and equipment.  | From Special Schedule 5: S_3a + S_3b |
| (77)  | Capital Expenditure (Total \$'000)                            | Assets, renewals, plant/equipment.  | Col (13a) Table 14 x 1,000           |
| (78)  | Estimated Cost to Bring to a Satisfactory Standard (\$'000)   | The amount of money that is required to be spent on an asset to ensure that it is in a satisfactory standard.   | From Special Schedule 7              |
| (79)  | Actual Annual Maintenance (\$'000)                            | What has been spent in the current year to maintain the assets.   | From Special Schedule 7              |
| (80)  | Mains Maintenance Cost (\$'000/100km)                         | Expenditure on maintenance of mains per 100km of main.  | Col (31) Table 15                    |
| (81)  | Rehabilitation of mains (km/100km)                            | Length of mains rehabilitated per 100km of main.  | From Col (27) Table 15               |
| (82)  | Rehabilitation of service connections (%)                     | Number of service connections rehabilitated as % of total.  | From Col (28) Table 15               |
| (83)  | Asset Renewals (\$'000)                                       | Expenditure on renewals.  | From Special Schedule 5: S_17c       |
| (84)  | Asset Renewals (\$'000 per 100km of main)                     | Expenditure on renewals per 100km of main.  | From Col (29) Table 15               |
| (85)  | Asset Renewals (% of CRC)                                     | Expenditure on renewals as percentage of Current Replacement Cost (CRC) of systems assets.  | From Col (30) Table 15               |
| (86)  | Assets in Condition as % of WDV                               | Assets in condition one are considered to be excellent and that there is no work required (other than normal maintenance) while assets in condition five are considered to be very poor with urgent renewal or upgrading being required.  | From Special Schedule 7              |
| (87)  | Renewals Ratio (%)  | Asset renewals (building and infrastructure) divided by Depreciation, amortisation and impairment (building and infrastructure). (Expressed as a ratio).  | From Special Schedule 7              |
| (88)  | Backlog Ratio (%)   | Estimated cost to bring assets to a satisfactory condition divided by total written   | From Special Schedule 7              |
| (89)  | Asset Maintenance Ratio (%)                                   | Actual asset maintenance divided by Required asset maintenance.   | From Special Schedule 7              |
| (90)  | Capital Expenditure Ratio (%)                                 | Annual capital expenditure divided by Annual depreciation.  | From Special Schedule 7              |
| (91)  | Operating Cost OMA (\$/property)                              | Total operation, maintenance and administration costs (plus proportion of bulk supplier OMA or purchase cost of water if no bulk supplier) divided by total number of connected properties.   | From Col (52) Table 16               |
| (92)  | Net Debt to Equity - W&S (%)                                  | Net debt (water supply and sewerage) divided by equity (water supply and sewerage). Net debt is borrowings plus bank overdrafts less cash and investments. Equity is Total Assets less Total Liabilities.   | From Col (26) Table 5A               |
| (93)  | Economic Real Rate of Return - Sewerage (%)                   | Revenue from operations less operating expenses (OMA + current cost depreciation) divided by written down replacement value of operational assets. Revenue from operations excludes interest income, grants for acquisition of assets and gain/loss on disposal. Operational assets include system assets plus plant and equipment. | From Col (11) Table 7                |
| (94)  | Breaks and Chokes (No. per 100km of main)                     | Breaks and chokes are partial or total blockages resulting in an interruption to sewerage services or overflows at gully traps. Blockages in risers and sidelines are excluded.   | From Col (24) Table 15               |
| (95)  | Infiltration (ML per 100km of main)                           | Estimated groundwater infiltration and stormwater inflow into the system per 100km of main.   | From Col (23) Table 15               |
| (96)  | Overflows (No. per 100km of main)                             | Recorded overflows in sewers, access chambers and pumping stations.   | From Col (25) Table 15               |
| (97)  | Service Complaints (per 1000 properties)                      | Service complaints including chokes and odour, but excluding billing. Exclude queries.  | From Col (62) Table 17               |
| (98)  | Sewage Treated that was Compliant                             | Percent of sewage volume treated that was compliant.  | From Col (59e) Table 17              |
| (99)  | Odour Complaints (per 1000 properties)                        | Odour complaints for treatment works, pumping stations and pipe network in your sewerage business.  | From Col (61) Table 17               |
| (100)   | Typical Residential Bill - Sewerage (\$/assessment)           | Calculated using the access charge for 2014-15 plus, if council has residential sewer usage charges, the average residential water consumption for 2013-14 multiplied by the usage charges and usage factor for 2014-15.  | From Col (8) Table 7                 |
| (100a)  | Pollution Incident Response Management Plan (PIRMP)? (Yes/No) | A Pollution Incident Response Management Plan (PIRMP) is made available on the utility's website for each sewage treatment works, as required by EPA.   | From Col (64a) Appendix D2           |
| (100b)  | No. of Wastewater Treatment Operators (No.)                   | The number of suitably qualified employees operating the utility's sewage treatment works.  | From Appendix I: Col (5)             |
| (101)   | Best Practice Implementation - Sewerage (%)                   | Implementation of the 9 requirements of the Best-Practice Management Framework for Sewerage.  | From Col (7) Table 3                 |
| (102)   | Strategic Business Plans Completed? (Yes/No)                  | 30-year Strategic Business Plan and financial plan are soundly based and are less than 5 years old.   | From Col (1) Table 3                 |

**Notes:**  
A. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.  
B. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 6

| 6. Water Supply - 2014/15 Charges, 2015/16 Bills |   |  |   |
|--|---|--|---|
| Column No.                                       | Performance Indicator   | Background to Formula  | Formula   |
| (1)  | Type of Tariff  | Tariff structure - Two Part, Inclining Block, Unmetered.   | From Council's Schedule of Fees and Charges   |
| (2)  | Fixed Charge (or Minimum) (\$)  | Fixed charge component of tariff.  | From Council's Schedule of Fees and Charges   |
| (4)  | Special Levies (\$)   | Charges directly levied upon properties and are neither a fixed or pay-for-use charge for water or sewage (e.g. environmental improvement levy).   | From Council's Schedule of Fees and Charges   |
| (5a-d)   | Usage Charge for Steps 1 and 2 (c/kL)   | Includes first two steps of usage charges ("All" if no steps or blank if not applicable).  | From Council's Schedule of Fees and Charges   |
| (5e)   | Billing (2006 National Guidelines) (%) implementation)                          |  |   |
| (6)  | Operating Cost (OMA) c/kL   | Total operation, maintenance and administration cost (excluding purchase of water) divided by total annual town water supplied (potable + non-potable).  | $[W\_1 + W\_2] \times 100 \div [[Col (13) + Col (14) Table 8] \times 1000]$                 |
| (7)  | Typical Developer Charge (\$/Equivalent Tenement (ET))                          | Upfront infrastructure contribution for new developments.  | WB136 (see note C)  |
| (8)  | Typical Residential Bill (\$/assessment) (see note C)                           | Calculated using the average residential water supplied for 2013-14 multiplied by the usage charges for 2014-15 plus the access charge for 2014-15.  | $Col (5) \times Col (14a) \div 100 + Col (2) Table 6$                                       |
| (11)   | Return on Assets (%)  | Total revenue less grants for acquisition of assets less total expenses plus revaluation decrements plus other expenses divided by written down replacement value of operational assets. Total revenue excludes gain/loss on disposal of assets. Operational assets include system assets plus plant and equipment.                              | $[(W\_13 - W\_11a - W\_5 + W\_4b + W\_4c)] \times 100 \div (W\_47 + W\_33b)$                |
| (12)   | Economic Real Rate of Return (%)  | Revenue from operations less operating expenses (OMA + current cost depreciation) divided by written down replacement value of operational assets. Revenue from operations excludes interest income and grants for acquisition of assets and gain/loss on disposal of assets. Operational assets include system assets plus plant and equipment. | $(W\_13 - W\_9 - W\_11a - W\_1 - W\_2 - W\_3) \times 100 \div (W\_47 + W\_33b)$             |
| (13)   | Residential Revenue from Usage Charges (% of residential bills)                 | Revenue from residential usage charges divided by total residential revenue (residential usage plus access charges including any rates).   | $W\_6b \times 100 \div [W\_6a + W\_6b]$   |
| (14a)  | Average Annual Residential Water Supplied (potable) (kL/property)               | Average annual residential water supplied (potable). Where an LWU has not reported residential water supplied and at least one of commercial and industrial consumption, 58% of the total potable supply has been used.  | $[Col (1) Table 8] \div [Cols (18) \times (21) \times (22) Table 9]$                        |
| (14b)  | Average Annual Residential Water Supplied (potable + non potable) (kL/property) | Average annual residential water supplied (potable and non potable).   | $[Col (1) + Col (11) + Col (12a) Table 8] \div [Cols (18) \times (21) \times (22) Table 9]$ |
| (14c)  | Average Annual Residential Water Supplied (potable + non potable) (L/c/d)       | Average annual residential water supplied per capita per day.  | $[Col (1) + Col (11) + Col (12a) Table 8] \div [Col (23) Table 9] \div 365$                 |
| (14d)  | Full Cost Recovery? (N / Y* / Y)  | Achieved if either the economic real rate of return or return on assets is >=0, or if a LWU has significantly increased its charges to recover its costs.  | From NOW records  |
| (15)   | Total Connected Properties  | Total connected properties (residential plus non-residential).<br>Calculated from number of assessments multiplied by the ratio of connected properties to assessments.  | from Col (20) Table 9   |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
- B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 7

| 7. Sewerage - 2014/15 Charges, 2015/16 Bills |  |   |  |
|--|--|---|--|
| Column No.                                   | Performance Indicator  | Background to Formula   | Formula  |
| (1)  | Fixed Charge (or Minimum) (\$)   | Fixed charge component of tariff.   | From Council's Schedule of Fees and Charges                                      |
| (2)  | Operating Cost (OMA) c/kL  | Total operation, maintenance and administration cost divided by total volume of sewage collected.   | $[S\_1 + S\_2] \times 100 \div [\text{Col (32) Table 15} \times 1000]$           |
| (3a)   | Non-residential Sewer Usage Charge (Not including SDF) (c/kL)                | Non-residential sewer usage charges not including sewer discharge factor.   | From Council's Schedule of Fees and Charges                                      |
| (3b)   | Trade Waste Usage Charge (c/kL)  | Charge applied to liquid trade waste dischargers.   | From Council's Schedule of Fees and Charges                                      |
| (4)  | Appropriate Liquid Trade Waste Fees & Charges? (Yes/No)                      | Appropriate trade waste fees and charges are applied to all liquid trade waste dischargers.   | From Council's Schedule of Rates, Fees and Charges                               |
| (5)  | Non-residential & Trade Waste Charges (% of Annual Rates and Charges)        | Non-residential charges plus trade waste charges divided by (residential charges + non-residential charges + trade waste charges).  | $[S\_7 + S\_8] \times 100 \div [S\_6 + S\_7 + S\_8]$                             |
| (6)  | Non-residential & Trade Waste Volume (% of Total Volume of Sewage Collected) | Percentage of total sewage collected.   | Col (36) + Col (37) Table 15   |
| (7)  | Typical Developer Charge (\$/Equivalent Tenement(ET))                        | Upfront infrastructure contribution for new developments.   | SB62 (see note C)  |
| (8)  | Typical Residential Bill (\$/assessment) (see note C)                        | Calculated using the access charge for 2014-15 plus, if council has residential sewer usage charges, the average residential water consumption for 2013-14 multiplied by the usage charges and usage factor for 2014-15.  | Col (1) + Col (1a) Table 7   |
| (9)  | Return on Assets (%)   | Total revenue less grants for acquisition of assets less total expenses plus revaluation decrements plus other expenses divided by written down replacement value of operational assets. Total revenue excludes gain/loss on disposal of assets. Operational assets include system assets plus plant and equipment.                 | $[(S\_14 - S\_5 - S\_12a + S\_4b + S\_4c)] \times 100 \div (S\_48 + S\_34b)$     |
| (11)   | Economic Real Rate of Return (%)   | Revenue from operations less operating expenses (OMA + current cost depreciation) divided by written down replacement value of operational assets. Revenue from operations excludes interest income, grants for acquisition of assets and gain/loss on disposal. Operational assets include system assets plus plant and equipment. | $(S\_14 - S\_10 - S\_12a - S\_1 - S\_2 - S\_3) \times 100 \div (S\_48 + S\_34b)$ |
| (11a)  | Full Cost Recovery? (N / Y* / Y)   | Achieved if either the economic real rate of return or the return on assets is >=0, or if a LWU has significantly increased its charges in order to recover its costs.  | From NOW records   |
| (11b)  | Recycled Water Usage Charge (c/kL)   | Charge applied for use of recycled water.   | From Council's Schedule of Fees and Charges                                      |
| (11c)  | Sewage Collected (kL/property)   | Includes residential, non-residential and trade waste.  | Col (39) Table 15  |
| (12)   | Connected Properties (No.)   | Total connected properties (residential plus non-residential). Calculated from number of assessments multiplied by the ratio of connected properties to assessments.  | From Col (3) Table 14  |

- Notes:**
- A. References to SB (eg. SB9) refer to questions in each LWU's Sewerage Performance Monitoring Database. Eg. refer to page 227.
- B. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 8

| 8. 2014/15 Water Supplied in Regional NSW |   |  |  |
|---|---|--|--|
| Column No.                                | Performance Indicator   | Background to Formula  | Formula  |
| (1)                                       | Residential   | Domestic (inhouse and ex-house) potable water supplied.  | WB54   |
| (2)                                       | Commercial  | Offices, shops, clubs, hotels, motels, caravan parks potable water supplied.   | WB55   |
| (3)                                       | Industrial  | Factories, mills, poultry, feed lots, sale yards, abbatoirs, mining potable consumption.   | WB56 + WB56a + WB56b + WB56c   |
| (4)                                       | Rural   | Farms or hobby farms outside urban zoned land, includes stock and domestic uses, market gardens, agricultural irrigation potable water supplied.   | WB57   |
| (5)                                       | Institutional   | Hospitals, schools, colleges etc potable water supplied.   | WB58   |
| (6)                                       | Public Parks and Gardens                                      | Watering of public parks, gardens, ovals etc using potable water.  | WB60   |
| (7)                                       | Total Revenue Water (potable)                                 | Excludes revenue from recycled water and urban stormwater used.  | Sum Col (1) to (6) Table 8   |
| (8)                                       | Real Loss (Leakage)   | Leakage. Real loss is included in water losses (see Note C).   | WB68   |
| (8a)                                      | Apparent Loss   | Illegal use plus meter inaccuracies  | WB67   |
| (8b)                                      | Unbilled Authorised Consumption                               | Includes fire fighting and flushing (see Note C).  | WB61   |
| (9)                                       | Total Non-Revenue Water                                       | Sum unbilled authorised water supplied plus water losses (potable).  | Col (8b) + Col (8a) + Col (8) Table 8 or Col (7) / 0.9 - Col (7) Table 8 |
| (10)                                      | Total Potable Urban Water Supplied                            | Sum of Total Revenue water plus Total Non-revenue water.   | Col (7) + Col (9) Table 8  |
| (11)                                      | Recycled Water for Non-Potable Urban Residential Water Supply | Total metered and estimated non-metered supply of non-potable recycled water by residential properties for the reporting period, excluding urban stormwater.   | WB150  |
| (11a)                                     | Recycled Water for Urban Non-Residential                      | Total metered and estimated non-metered supply of recycled water by commercial, municipal, industrial properties and other users (fire fighting, mains flushing etc) for the reporting period, excluding urban stormwater.               | WB151  |
| (12a)                                     | Non-Potable Urban Residential Water Supplied                  | Non-potable water reticulated to residential customers.  | WB63   |
| (12b)                                     | Non-Potable Urban Non-Residential Water Supplied              | Total metered and estimated non-metered non-potable water supplied to commercial, mining, manufacturing, electricity generators, other industrial, rural, municipal, public parks and unbilled, excluding recycled and urban stormwater. | WB63a + WB63b + WB63c + WB63d + WB63e + WB63f + WB63g + WB63i + WB63j    |
| (12c)                                     | Non-Potable Urban Water Supplied                              | Includes untreated water for industry or non-potable water component in a dual water supply system and may also include recycled water .   | WB64 + WB157   |
| (13)                                      | Total Annual Urban Water Supplied                             | Total water supplied equals the sum of potable water supplied plus non-potable supply for industry or non-potable component in a dual supply system less recycled water for non-potable supply.  | Col (10) + Col (12c) Table 8 - WB156 + WB47a                             |
| (14)                                      | Bulk Water Exports  | Sales to other Local Water Utilities (LWUs) of potable and non-potable water.  | WB59   |
| (11b)                                     | Recycled Water - Non-Urban                                    | Total metered and estimated non-metered water supplied for agricultural purposes, environmental purposes and on-site use, excluding urban stormwater.  | WB152 + WB153 + WB154  |
| (11c)                                     | Recycled Water - Total  | Total recycled water supplied.   | Col (11) + Col (11a) + Col (11b) Table 8                                 |
| (15)                                      | Surface Water   | Surface water + ground water + bulk purchases should equal total annual water supplied.  | WB41 + WB42 + WB43 + WB44  |
| (16)                                      | Groundwater   | Volume extracted from groundwater.   | WB45   |
| (16b)                                     | Recycled Water  | Volume of water sourced from recycling.  | WB47   |
| (17)                                      | Bulk Purchase   | Potable plus non-potable bulk water purchased.   | WB52b  |
| (17b)                                     | Total Sourced Water   | Excluding non-urban recycled.  | Col (15) + Col (16) + Col (16b) + Col (17) Table 8                       |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
  - B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
  - C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 9

| 9. Water Supply - 2014/15 Utility Characteristics |  |   |  |
|---|--|---|--|
| Column No.  | Performance Indicator  | Background to Formula   | Formula                                  |
| (18)  | Total No. of Assessments (see note C)                                    | Where this data is ambiguous or missing, it has been estimated from other supporting information.   | WB36                                     |
| (18a)   | Number of Service Connections  | Number of physical connections to the water supply system (ie. A multiple dwelling with a single metered connection to the water supply system is counted as one connection).   | WB30                                     |
| (19)  | Ratio of Connected Properties to Assessments (see note C)                | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | WB37                                     |
| (20)  | Connected Properties   | Total connected properties (residential plus non-residential). Calculated from number of assessments multiplied by the ratio of connected properties to assessments.  | Col (18) x Col (19) Table 9              |
| (21)  | Ratio of Residential Assessments to Total Assessments (see note C)       | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | WB37a                                    |
| (22)  | Ratio of Residential Connections to Residential Assessments (see note C) | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | WB38                                     |
| (22a)   | Connected Residential Properties (No.)                                   | A residential property connected to the water supply system, which may or may not have a separate assessment.   | Col (18) x Col (21) x Col (22) Table 9   |
| (22b)   | New Residential Dwellings Connected (%)                                  | New residences connected this reporting year as percentage of connected residential properties.   | WB31 ÷ Col (22a) Table 9                 |
| (23)  | Permanent Population   | Where this data is ambiguous or missing, it has been estimated from other supporting information (financial data, previous year's data).  | WB1                                      |
| (24)  | Peak Population (% of permanent)   | Maximum population supplied anytime this reporting year.  | WB2 x 100 ÷ WB1                          |
| (25)  | Headworks Transfer Mains (raw water) (km)                                | Trunk mains which are part of the headworks system (eg. dam, river) for delivery of water either from scheme to scheme or to treatment works.   | WB20a                                    |
| (25a)   | Trunk and Reticulation Mains (km)  | Total length of mains including trunk mains and reticulation.   | WB22                                     |
| (26)  | Properties Served per km of main   | Total number of connected properties divided by length of mains.  | Col (20) ÷ Col (25a) Table 9             |
| (27)  | Water Treatment Works  | Number of works providing full treatment.   | WB17                                     |
| (28)  | Dams   | Number of dams.   | WB7                                      |
| (29)  | Bores  | Number of water supply bores.   | WB13                                     |
| (30)  | Pumping Stations   | Number of pumping stations.   | WB15                                     |
| (30a)   | Pumping Stations per 100km of main                                       | Number of pumping stations divided by length of main.   | Col (30) ÷ [Col (25a) ÷ 100] Table 9     |
| (31)  | Capital Expenditure (\$/property)  | Assets, renewals, plant/equipment.  | Col (31a) x 1,000,000 ÷ Col (20) Table 9 |
| (31a)   | Capital Expenditure (Total \$M)  | Assets, renewals, plant/equipment.  | W_16 ÷ 1,000,000                         |
| (31b)   | Capital Works Grants (\$'000)  | Grants for acquisition of assets.   | W_11a                                    |
| (32)  | Total Workforce (water supply) (Employees/1000 properties)               | Equivalent full time employees involved with water supply.  | WB120                                    |
| (34)  | % Undergoing Training  | % of employees in water supply workforce undergoing training for 2+ days during the year.   | WB122 x 100 ÷ WB120                      |
| (37)  | Outsourcing % of Maintenance Cost  | % expended on outsourcing for maintenance of water supply business.   | WB130                                    |
| (38)  | Number of Injuries   | Number of injuries (fatality, permanent disability or time loss of 1+ days) in water business.  | WB124                                    |
| (39)  | Total Days Lost (%)  | Number of days lost for all reasons (disputes, sick leave, accidents) in water supply business expressed as a percentage of the total number of days worked.  | WB123 ÷ (230 x WB120)                    |
| (40a)   | Days Lost due to Injuries  | Number of days lost due to injuries (time loss of 1+ days) in water supply business.  | WB125                                    |
| (40b)   | Days Lost due to Injuries (% of Total Days Worked)                       | Number of days lost due to injuries (time loss of one or more days) as a percentage of total days worked in water supply business.  | (WB125 x 100) ÷ (230 x WB120)            |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
- B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 10

| 10. Water Supply - 2014/15 Asset Management |   |   |  |
|---|---|---|--|
| Column No.                                  | Performance Indicator   | Background to Formula   | Formula  |
| (41)  | Real Losses (Leakage) (L/d/c)   | Real loss or leakage L per day per connection.  | WB68 ÷ 365 ÷ Col (18a) Table 9   |
| (41a)                                       | Real Losses (Leakage) (kL/km/d)   | Real loss or leakage kL per km of main per day.   | WB68 x 1000 ÷ WB22 ÷ 365   |
| (41b)                                       | Infrastructure Leakage Index (ILI)  | Ratio of Current Annual Real Loss to Unavoidable Annual Real Loss.  | Determined as per NPF  |
| (41c)                                       | Leakage Test (Type & Extent)  | Type and extent of Leakage Test undertaken, the year and the result of the test.  | Most 2014/15 results from Regional NSW Water Loss Management Program         |
| (41d)                                       | (Year)  |   |  |
| (41e)                                       | (Result %)  |   |  |
| (41f)                                       | Total Non-Revenue Water   | Sum unbilled authorised consumption plus water losses (potable).  | From Col (9) Table 8   |
| (42)  | Main Breaks (per 100km of main)   | Number of main breaks per 100km of main. A main break is where the water main has to be shut down. Excludes service connection breaks.  | WB104 ÷ (WB22 ÷ 100)   |
| (43)  | Unplanned Interruptions to Supply (per 1000 properties)                         | Number of properties affected by unplanned interruptions to supply per 1000 properties. Includes each occurrence. Excludes breaks in service connections or instances of low pressure.                            | WB106 x 1000 ÷ Col (20) Table 9  |
| (44)  | Rehabilitation of mains (% of total length)                                     | Length of mains rehabilitated as % of total length of main.   | WB23 ÷ (WB22 ÷ 100)  |
| (45)  | Rehabilitation of service connections (%)                                       | Number of service connections rehabilitated as % of total.  | WB24 x 100 ÷ Col (18a) Table 9   |
| (45a)                                       | Rehabilitation of water meters (%)  | Number of water meters rehabilitated as % of total.   | WB25 x 100 ÷ Col (18a) Table 9   |
| (46)  | Renewals (\$'000 per 100km of main)   | Expenditure on renewals per 100km of main.  | W_16c ÷ (WB22 ÷ 100)   |
| (47)  | Renewals (% of CRC)   | Expenditure on renewals as percentage of Current Replacement Cost (CRC) of systems assets.  | W_16c x 100 ÷ (Col (61) Table 11 x 1000)                                     |
| (48)  | Mains Maintenance Cost (\$'000/100km of main)                                   | Expenditure on maintenance of mains per 100km of main.  | (W_2d ÷ 1000) ÷ (WB22 ÷ 100)   |
| (49)  | Total Urban Water Supplied (ML)   | Where an LWU has not reported total potable consumption, the previous year's consumption has been adopted and is shown in italics bold.   | From Col (13) Table 8  |
| (50)  | Non-potable Urban Water Supplied (ML)   | Where an LWU has not reported total potable consumption, the previous year's consumption has been adopted and is shown in italics bold.   | From Col (12c) Table 8   |
| (51)  | % Water Recycled  | For non-potable urban water supplied.   | Col (11c) x 100 ÷ Col (13) Table 8   |
| (52)  | Peak Day to Average Consumption (%)   | Maximum 24 hour potable water supplied in reporting year (ML/d) divided by average daily consumption.   | WB82 ÷ [Col (49) ÷ 365]  |
| (53)  | Peak Week to Average Consumption (%)  | Average daily consumption over peak week (ML/d) divided by average daily consumption.   | WB83 ÷ [Col (49) ÷ 365]  |
| (56a)                                       | Average Annual Residential Water Supplied (Potable) (kL/property)               | Average annual residential consumption (potable). Where an LWU has not reported residential consumption and at least one of commercial and industrial consumption, 58% of the total potable supply has been used. | [Col (1) Table 8] ÷ [Cols (18) x (21) x (22) Table 9]                        |
| (56)  | Average Annual Residential Water Supplied (Potable + Non Potable) (kL/property) | Average annual residential consumption (potable + non potable). See column 56a above.   | [Col (1) + Col (11) + Col (12a) Table 8] ÷ [Cols (18) x (21) x (22) Table 9] |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
- B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 10A

| 10A. Water Supply - 2014/15 Estimated Real Water Losses |  |  |  |
|---|--|--|--|
| Column No.  | Performance Indicator                              | Background to Formula  | Formula  |
| (1)   | Water Utility                                      | Only water utilities that participated in the Water Loss Management Program (WLMP) for Regional NSW Water Utilities are included.  | Appendix 1 of the WLMP Report.                               |
| (2)   | Zone   | Where water utilities have been divided up into different zones, these are listed separately.  | Appendices 3 and 4 of the WLMP Report.                       |
| (3)   | Utility Connections 2009-10 (No.)                  | Number of physical connections to the water supply system for the water utility in 2009-10 (ie. A multiple dwelling with a single metered connection to the water supply system is counted as one connection).                                 | Col (18a) Table 9 [2009-10 Benchmarking Report]              |
| (4)   | Zone Connections (No.)                             | Number of physical connections to the water supply system for each zone.   | Appendices 3 and 4 of the WLMP Report.                       |
| (5)   | Connection Ratio (Zone:Utility)                    | The ratio of connections for each zone to the total connections for the water utility.   | $100 \times \text{Col (4)} \div \text{Col (3)}$              |
| (6)   | ILI Before   | Infrastructure Leakage Index (ILI) before the WLMP.  | Appendices 3 and 4 of the WLMP Report.                       |
| (7)   | Utility Potable Annual Water Supplied 2009-10 (ML) | Sum of Total Revenue water plus Total Non-revenue water for the water utility in 2009-10.  | Col (10) Table 8 [2009-10 Benchmarking Report]               |
| (8)   | Estimated Water Loss - Before (L/c/d)              | Estimated water losses before leakage detection and repair.  | Appendices 3 and 4 of the WLMP Report.                       |
| (9)   | Estimated Water Loss - Before (ML)                 | Estimated water losses before leakage detection and repair.  | $\text{Col (8)} \times \text{Col (3)} \times 365 \div 10^6$  |
| (10)  | Estimated Water Loss - Before (%)                  | Estimated water losses before leakage detection and repair.  | $100 \times \text{Col (9)} \div \text{Col (7)}$              |
| (11)  | Estimated Water Loss - After (L/c/d)               | Estimated water losses after leakage detection and repair.   | Appendix 4 of the WLMP Report.                               |
| (12)  | Estimated Water Loss - After (ML)                  | Estimated water losses after leakage detection and repair.   | $\text{Col (11)} \times \text{Col (3)} \times 365 \div 10^6$ |
| (13)  | Estimated Water Loss - After (%)                   | Estimated water losses after leakage detection and repair.   | $100 \times \text{Col (11)} \div \text{Col (7)}$             |
| (14)  | Annual Water Savings (ML)                          | Annual water savings for each zone and the water utility as a whole after leakage detection and repair.  | $\text{Col (9)} - \text{Col (12)}$                           |
| (15)  | Test   | The type and extent of leakage detection and repair and/or pressure reduction undertaken for each water utility. Eg. L95 indicates that the leakage detection and repair project carried out covered 95% of the utility's service connections. | Appendix 4 of the WLMP Report.                               |
| (16)  | Test Year  | The year the above test was performed.   | Appendix 4 of the WLMP Report.                               |
| (17)  | Page   | Page reference of the water utility's project summary in the WLMP Report.  | Appendix 1 of the WLMP Report.                               |
| (18)  | Comments   | Details on any significant outcomes from the WLMP.   | Appendices 3 and 4 of the WLMP Report.                       |

**Notes:**  
A. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 11

| 11. Water Supply - 2014/15 Financial, Efficiency |   |  |   |
|--|---|--|---|
| Column No.                                       | Performance Indicator   | Background to Formula  | Formula   |
| (57)   | Total Revenue (excl Capital Works Grants) (\$'000)                              | Total Revenue excluding grants for acquisition of assets, interest income and gain/loss from disposal of assets [Residential Charges + Non-residential Charges + Extra Charges + Other Revenues + Grants (excluding for Acquisition of Assets) + Contributions (Developer Charges + Developer Provided Assets + Other Contributions)]. | $(W_{13} - W_9 - W_{11a}) \div 1000$  |
| (57a)  | Revenue per property (\$)   | Total revenue per connected property.  | $[\text{Col (57) Table 11}] \times 1000 \div [\text{Col (20) Table 9}]$                       |
| (58)   | Residential Revenue (% of rates and charges total)                              | Where an LWU has not reported a breakdown of revenue from rates and charges and sales into residential and non-residential, the percentage revenue for such LWUs has been estimated from the reported percentages of similar LWUs.   | $(W_{6a} + W_{6b}) \times 100 \div (W_6 + W_7)$   |
| (59)   | Residential Water Supplied (% of potable water supplied excluding water losses) | % of potable water <u>excluding</u> water losses.  | $(WB54a \div WB62) \times 100$  |
| (58a)  | Residential Revenue from usage charges (%)                                      | Resential revenue from usage charges.  | $W_{6b} \times 100 \div (W_{6a} + W_{6b})$  |
| (60)   | Written Down Replacement Cost (\$M)   | Written down replacement cost of system assets.  | $W_{47} \div 1,000,000$   |
| (61)   | Current Replacement Cost (CRC) of System Assets (\$M)                           | The value of the infrastructure assets expressed in terms of how much it would cost to construct modern assets to provide the same function (ie. MEERA - Modern Engineering Equivalent Replacement Asset).   | $W_{45} \div 1,000,000$   |
| (62)   | Current Replacement Cost per Assessment (\$)                                    | The value of the infrastructure assets divided by the number of assessments.   | $W_{45} \div \text{Col (18) Table 9}$   |
| (63)   | Net Debt to Equity - W&S (%)  | All overdrafts, repayable borrowings, interest bearing non-repayable borrowings, advances and leases less cash and investments divided by total equity.  | $[(W_{36} + W_{38} - W_{30}) + (S_{37} + S_{39} - S_{31})] \times 100 \div (W_{44} + S_{45})$ |
| (62a)  | Written Down Value of Current Replacement Cost per property (\$)                | The written down value of the infrastructure assets divided by the number of connected properties.   | $W_{47} \div \text{Col (20) Table 9}$   |
| (63a)  | Economic Real Rate of Return (%)  | See Col (12) Table 6.  | From Col (12) Table 6.  |
| (63b)  | Return on Assets (%)  | See Col (11) Table 6.  | From Col (11) Table 6.  |
| (65)   | Operating Result (\$/property)  | Total revenue less total expenses less grants for acquisition of assets divided by total number of connected properties.   | $W_{15a} \div \text{Col (20) Table 9}$  |
| (64a)  | Cross Subsidies (Annual Fees & Charges) (\$/assessment)                         | Cross subsidies from residential customers using less than allowance to non-residential customers and to large connections in unmetered supplies.  | $(W_{27b} + W_{27c} + W_{27d}) \div \text{Col (18) Table 9}$                                  |
| (64b)  | Cross Subsidies (Developer Charges) (\$/ET)                                     | Cross subsidies in water supply developer charges.   | $W_{28b} \div \text{Col (18) Table 9}$  |
| (66)   | Externalities (\$/property)   | Water fees paid by LWUs to Water NSW.  | From Water NSW records  |
| (66a)  | Loan Payment (\$/property)  | Includes interest expenses, repayment of debt (Loans, Advances, Finance Leases).   | $(W_{4a} + W_{17a} + W_{17b} + W_{17c}) \div \text{Col (20) Table 9}$                         |
| (67)   | Operating Cost OMA (\$/property)  | Total operation, maintenance and administration costs (plus proportion of bulk supplier OMA or purchase cost of water if no bulk supplier) divided by total number of connected properties.  | $[W_1 + W_2] \div \text{Col (20) Table 9}$<br>plus bulk suppliers OMA                         |
| (68)   | Management Cost (\$/property)   | Total management costs divided by total number of connected properties.  | $W_1 \div \text{Col (20) Table 9}$  |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
  - B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
  - C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 12

| 12. Water Supply - 2014/15 Health, Levels of Service |  |  |  |
|--|--|--|--|
| Column No.   | Performance Indicator  | Background to Formula  | Formula  |
| (68a)  | Drinking Water Management System (DWMS) - Basis (e.g. ADWG, HACCP)         | May include HACCP, ISO 9001, WSAA ADWG Aquality assessment, ADWG Framework for Management of Drinking Water Quality.   | WB113a   |
| (68b)  | Drinking Water Management System (DWMS) - External Assessment? (Y/N)       | Audited by an external accredited assessor and received certification for ISO 9001, HACCP or assessed against WSAA ADWG or ADWG.   | WB114  |
| (69)   | Physical - % of Samples Complying with 2011 ADWG                           | Physical water quality compliance achieved - %.<br>Overall compliance with physical requirements including the key characteristics of turbidity, pH and colour. Compliance refers to the number of samples taken for system performance monitoring and not the number of tests. Excludes samples taken for operational monitoring. | see note C   |
| (69a)  | Physical Compliance Achieved?  | Physical water quality compliance (ADWG 2011) achieved - Yes or No. Also see 69 above.   | 'Yes' if Col (69) ≥ 50%  |
| (70)   | Chemical - % of Samples Complying with 2011 ADWG                           | Chemical water quality compliance achieved - %.<br>Overall compliance with chemical requirements. Compliance refers to the number of samples taken for system performance monitoring and not the number of tests. Excludes samples taken for operational monitoring.   | see note C   |
| (70a)  | Chemical Compliance Achieved?  | Chemical water quality compliance (ADWG 2011) achieved - Yes or No. Also see 70 above.   | 'Yes' if Col (70) ≥ 95%  |
| (70b)  | No. of Zones where Chemical Compliance was Achieved                        | Assessment with the chemical requirements of the water quality guidelines for each zone of the system.   | Report as number of zones complying out of the total number of zones |
| (70c)  | % of Population with Chemical Compliance                                   | From population served and compliance achieved by each zone.   |  |
| (71)   | Microbiological - % of Samples Complying with 2011 ADWG                    | E. coli water quality compliance (ADWG 2011) achieved - %.<br>E. coli contamination is the primary health-related indicator. Compliance refers to the number of samples taken for system performance monitoring and not the number of tests. Excludes samples taken for operational monitoring.                                    | see note D   |
| (71a)  | E. coli Compliance Achieved?   | E. coli water quality compliance (ADWG 2011) achieved - Yes or No. Also see 71 above.  | 'Yes' if Col (71) ≥ 98%  |
| (71b)  | No. of Zones where E. coli Compliance was Achieved                         | Assessment with the E. coli requirements of the water quality guidelines for each zone of the system.  | Report as number of zones complying out of the total number of zones |
| (71c)  | % of Population with E. coli Compliance                                    | From population served and compliance achieved by each zone.   |  |
| (73)   | Water Quality Complaints (per 1000 properties)                             | Complaints are any expression of customer dissatisfaction reported in person, by phone, fax, letter or email. Water quality complaints are reported under the relevant source water treatment works.   | (WB101a + WB101b) x 1000 ÷ Col (20) Table 9                          |
| (74)   | Water Service Complaints (per 1000 properties)                             | Complaints are any expression of customer dissatisfaction reported in person, by phone, fax, letter or email.  | WB96 x 1000 ÷ Col (20) Table 9                                       |
| (75a)  | Customers with Restrictions for Non-payment of Bills (per 1000 properties) | Restrictions and disconnections applied for non-payment of water bills in the reporting period.  | WB132a x 1000 ÷ Col (20) Table 9                                     |
| (75b)  | Customers with Legal Action for Non-payment of Bills (per 1000 properties) | Legal actions for non-payment of water bills in the reporting period.  | WB132b x 1000 ÷ Col (20) Table 9                                     |
| (77)   | Incidence of Unplanned Interruptions (No./1000 properties)                 | Includes each occurrence of unplanned interruptions to supply. Excludes reduced levels of service or breaks in service connections.  | WB105 x 1000 ÷ Col (20) Table 9                                      |
| (78)   | Average Duration of Interruptions (minutes)                                | Average duration of unplanned interruptions.   | WB107  |
| (78a)  | Drought Water Restrictions (% of time)                                     | Percent of time that water restrictions apply.   | (WB95 ÷ 365) x 100   |

- Notes:**
- A. References to WB and WT (eg. WB99, WT16) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
- B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in '\$000 whereas the whole dollar value is used in these Tables and formulae.
- C. Physical compliance - sum for all treatment works, the product of WT16 multiplied by WT17 for each treatment works. Divide the total by the sum of WT16 for all treatment works.
- Chemical compliance - sum for all treatment works, the product of WT18 multiplied by WT19 for each treatment works. Divide the total by the sum of WT18 for all treatment works.
- D. Sum for all treatment works, the product of WT26 multiplied by WT27 for each treatment works. Divide the total by the sum of WT26 for all treatment works.
- An LWU complied with the 2011 NHMRC/NRMMC Australian Drinking Water Guidelines for E. coli if the required number of samples was tested and:
- At least 98% of the samples contained no E. coli*
- For LWUs which did not comply, the percentage of samples complying is shown.
- E. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 13

| 13. Water Supply - 2014/15 Benchmarking Cost Data |   |   |  |
|---|---|---|--|
| Column No.  | Performance Indicator   | Background to Formula   | Formula  |
| (79a)   | Total O&M Cost (\$/property)  | Maintenance, Operation, Energy, Chemical and Bulk Purchase costs.                 | Col (79) + Col (80) + Col (81) + Col (82) + Col (82a) Table 13 |
| (79)  | Operating Cost Components - Maintenance (\$/property)                       | Maintenance cost of all water system assets.                                      | [W_2b + W_2d + W_2f + W_2i + W_2l + W_2n] ÷ Col (20) Table 9   |
| (80)  | Operating Cost Components - Operation (\$/property)                         | Operation cost of all water system assets.  | [W_2a + W_2c + W_2e + W_2g + W_2j + W_2m] ÷ Col (20) Table 9   |
| (81)  | Operating Cost Components - Energy (\$/property)                            | Energy cost of water pumping and treatment.                                       | W_2h ÷ Col (20) Table 9  |
| (82)  | Operating Cost Components - Chemicals (\$/property)                         | The chemicals cost for water treatment.   | W_2k ÷ Col (20) Table 9  |
| (82a)   | Operating Cost Components - Bulk Purchase (\$/property)                     | Purchase of water cost.   | W_20 ÷ Col (20) Table 9  |
| (83)  | Operating Cost Components - Dams & Weirs (\$/property)                      | Operation and Maintenance cost of dams and weirs.                                 | [W_2a + W_2b] ÷ Col (20) Table 9                               |
| (84)  | Operating Cost Components - Mains (\$/property)                             | Operation and Maintenance cost of water mains.                                    | [W_2c + W_2d] ÷ Col (20) Table 9                               |
| (85)  | Operating Cost Components - Reservoirs (\$/property)                        | Operation and Maintenance cost of reservoirs.                                     | [W_2e + W_2f] ÷ Col (20) Table 9                               |
| (86)  | Operating Cost Components - Pumping Stations (\$/property)                  | Operation, Energy and Maintenance cost of water pumping stations.                 | [W_2g + W_2h + W_2i] ÷ Col (20) Table 9                        |
| (87)  | Operating Cost Components - Water Treatment (\$/property)                   | Operation, Chemical, Maintenance and Bulk Purchase cost of water treatment works. | [W_2j + W_2k + W_2l] ÷ Col (20) Table 9                        |
| (88)  | Operating Cost Components - Other (\$/property)                             | Operation and Maintenance cost of other water system assets.                      | [W_2m + W_2n + W_2o] ÷ Col (20) Table 9                        |
| (89)  | Management Cost Components - Administration (\$/property)                   | Administration costs.   | W_1a ÷ Col (20) Table 9  |
| (90)  | Management Cost Components - Engineering & Supervision (\$/property)        | Engineering and Supervision costs.  | W_1b ÷ Col (20) Table 9  |
| (91a)   | Management Cost Components - Total (\$/property)                            | Administration, Engineering and Supervision costs.                                | Col (89) + Col (90) Table 13                                   |
| (91)  | Management Cost Components - Total (c/kL)                                   | Management cost per kL of urban water supplied.                                   | [W_1a + W_1b] x 100 ÷ [Col (49) Table 10 x 1000]               |
| (91b)   | Total OMA Cost (\$/property)  | Operation, Maintenance and Management costs.                                      | Col (79a) + Col (91a) Table 13                                 |
| (92)  | Headworks Component (\$/property)   | From the headworks component estimated in the reporting forms.                    | [W_1 + W_2] x [WB133 ÷ 100] ÷ Col (20) Table 9                 |
| (93)  | Distribution Component (\$/property)  | From the distribution component estimated in the reporting forms.                 | [W_1 + W_2] x [WB134 ÷ 100] ÷ Col (20) Table 9                 |
| (94)  | Pumping Cost Components - Total Water Pumping Cost (c/kL)                   | From special schedule No. 3.  | [W_2g + W_2h + W_2i] x 100 ÷ [Col (49) Table 10 x 1000]        |
| (95)  | Pumping Cost Components - Total Water Pumping Cost (\$'000/pumping station) | From special schedule No. 3.  | [W_2g + W_2h + W_2i] ÷ 1000 ÷ Col (30) Table 9                 |
| (96)  | Pumping Cost Components - Operation (\$'000/pumping station)                | From special schedule No. 3.  | [W_2g ÷ 1000] ÷ Col (30) Table 9                               |
| (97)  | Pumping Cost Components - Maintenance (\$'000/pumping station)              | From special schedule No. 3.  | [W_2i ÷ 1000] ÷ Col (30) Table 9                               |
| (98)  | Pumping Cost Components - Energy (\$'000/pumping station)                   | From special schedule No. 3.  | [W_2h ÷ 1000] ÷ Col (30) Table 9                               |
| (100)   | Water Main Cost Components - Total Water Main Cost (c/kL)                   | From special schedule No. 3.  | [W_2c + W_2d] x 100 ÷ [Col (49) Table 10 x 1000]               |
| (101)   | Water Main Cost Components - Total Water Main Cost (\$'000/100km)           | From special schedule No. 3.  | [W_2c + W_2d] ÷ 1000 ÷ [Col (25a) Table 9 ÷ 100]               |
| (102)   | Water Main Cost Components - Operation (\$'000/100km)                       | From special schedule No. 3.  | [W_2c ÷ 1000] ÷ [Col (25a) Table 9 ÷ 100]                      |
| (103)   | Water Main Cost Components - Maintenance (\$'000/100km)                     | From special schedule No. 3.  | [W_2d ÷ 1000] ÷ [Col (25a) Table 9 ÷ 100]                      |
| (104)   | Treatment Cost Components - Total Water Treatment Cost (c/kL)               | From special schedule No. 3.  | [W_2j + W_2k + W_2l] ÷ [10 x Col (49) Table 10]                |
| (105)   | Treatment Cost Components - Operation (\$/property)                         | From special schedule No. 3.  | W_2j ÷ Col (20) Table 9  |
| (106)   | Treatment Cost Components - Maintenance (\$/property)                       | From special schedule No. 3.  | W_2l ÷ Col (20) Table 9  |
| (107)   | Treatment Cost Components - Chemical (\$/property)                          | From special schedule No. 3.  | W_2k ÷ Col (20) Table 9  |

- Notes:**
- A. References to WB (eg. WB99) refer to questions in each LWU's Water Supply Performance Monitoring Database. Eg. refer to page 213.
- B. References to W\_ (eg. W\_15) refer to items in Special Schedules Nos 3 and 4 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 14

| 14. Sewerage - 2014/15 Utility Characteristics |   |   |  |
|--|---|---|--|
| Column No.                                     | Performance Indicator                                       | Background to Formula   | Formula                                  |
| (1)  | Total No. of Assessments (see note C)                       | Where this data is ambiguous or missing, it has been estimated from other supporting information (financial data, previous year's data).  | SB17                                     |
| (2)  | Ratio of Connected Properties to Assessments (see note C)   | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | SB18                                     |
| (3)  | Connected Properties  | Total connected properties (residential plus non-residential).<br>Calculated from number of assessments multiplied by the ratio of connected properties to assessments.   | Col (1) x Col (2) Table 14               |
| (4)  | Ratio of Residential Assessments to Total Assessments       | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | SB18a                                    |
| (5)  | Ratio of Residential Connections to Residential Assessments | This ratio has been determined from previous performance reports. It does not normally change from year to year and will be continued unless change is considered warranted by the LWU, in which case evidence of a different factor should be provided by the LWU. | SB19                                     |
| (5a)   | Connected Residential Properties                            | A residential property connected to the sewerage system, which may or may not have a separate assessment.   | Col (1) x Col (4) x Col (5) Table 14     |
| (6)  | Permanent Population  | Where this data is ambiguous or missing, it has been estimated from other supporting information (financial data, previous year's data).  | SB1                                      |
| (7)  | Peak Population (% of permanent)                            | Maximum population served anytime this reporting year.  | SB2 x 100 ÷ SB1                          |
| (8)  | Mains (km)  | Total length of sewer mains including reticulation, gravity and rising mains.   | SB9                                      |
| (9)  | Properties Served per km of main                            | Total number of connected properties divided by length of mains.  | Col (3) ÷ Col (8) Table 14               |
| (10)   | Sewage Treatment Works (No.)                                | Number of treatment works.  | SB3                                      |
| (11)   | Pumping Stations  | Number of sewage pumping stations.  | SB5                                      |
| (12)   | Pumping Stations per 100km of main                          | Number of pumping stations divided by length of main.   | Col (11) ÷ [Col (8) Table 14 ÷ 100]      |
| (13)   | Capital Expenditure (\$/property)                           | Assets, renewals, plant/equipment.  | Col (13a) x 1,000,000 ÷ Col (3) Table 14 |
| (13a)  | Capital Expenditure (\$M)                                   | Assets, renewals, plant/equipment.  | S_17 ÷ 1,000,000                         |
| (13b)  | Capital Works Grants (\$'000)                               | Grants for acquisition of assets.   | S_12a                                    |
| (14)   | Total Workforce (sewerage) (Employees/1000 properties)      | Equivalent full time employees involved in sewerage business.   | SB49                                     |
| (15)   | % Female  | % of equivalent full time female employees in total sewerage business workforce.  | SB50 x 100 ÷ SB49                        |
| (16)   | % Undergoing Training                                       | % of employees in sewerage workforce undergoing training for 2+ days during the year.   | SB51 x 100 ÷ SB49                        |
| (19)   | Outsourcing % of Maintenance Cost                           | % expended on outsourcing for maintenance of sewerage business.   | SB59                                     |
| (20)   | Number of Injuries  | Number of injuries (fatality, permanent disability or time loss of one or more days) in water supply business.  | SB53                                     |
| (21)   | Total Days Lost (%)   | Number of days lost for all reasons (disputes, sick leave, accidents) in sewerage business expressed as a percentage of the total number of days worked.  | SB52 ÷ (230 x SB49)                      |
| (22)   | Days Lost due to Injuries (No.)                             | Number of days lost due to injuries (time loss of one or more days) in sewerage business.   | SB54                                     |
| (22a)  | Days Lost due to Injuries (% of Total Days Lost)            | Number of days lost due to injuries (time loss of one or more days) as a percentage of number of days lost for all reasons in sewerage business.  | (SB54 x 100) / SB52                      |

- Notes:**
- A. References to SB (eg. SB9) refer to questions in each LWU's Sewerage Performance Monitoring Database. Eg. refer to page 227.
- B. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 15

| 15. Sewerage - 2014/15 Asset Management |  |   |  |
|---|--|---|--|
| Column No.                              | Performance Indicator                                      | Background to Formula   | Formula  |
| (23)                                    | Infiltration (ML per 100km of main)                        | Estimated groundwater infiltration and stormwater inflow into the system per 100km of main.   | $\Sigma ST31 \div (SB9 \div 100)$  |
| (24)                                    | Breaks and Chokes (No. per 100km of main)                  | Breaks and chokes are partial or total blockages resulting in an interruption to sewerage services or overflows at gully traps. Blockages in risers and sidelines are excluded. | $SB64 \div (SB9 \div 100)$   |
| (25)                                    | Overflows (No. per 100km of main)                          | Recorded overflows in sewers, access chambers and pumping stations. Overflows in risers and sidelines are excluded.   | $SB63a \div (SB9 \div 100)$  |
| (27)                                    | Rehabilitation of mains (% of total length)                | Length of mains rehabilitated as % of total length of main.   | $(SB10 \div SB9) \times 100$   |
| (28)                                    | Rehabilitation of service connections (%)                  | Number of service connections rehabilitated as % of total.  | $SB11 \times 100 \div \text{Col(3) Table 14}$  |
| (29)                                    | Renewals (\$'000 per 100km of main)                        | Expenditure on renewals per 100km of main.  | $(S\_17c \div 1000) \div (SB9 \div 100)$   |
| (30)                                    | Renewals (% of CRC)  | Expenditure on renewals as % of Current Replacement Cost (CRC) of systems assets.   | $S\_17c \times 100 \div [\text{Col (46) Table 16} \times 1000]$  |
| (31)                                    | Mains Maintenance Cost (\$'000 per 100km of main)          | Expenditure on maintenance of mains per 100km of main.  | $(S\_2b \div 1000) \div (SB9 \div 100)$  |
| (31a)                                   | Overflows Reported to Regulator (No. per 100km of main)    | Untreated sewage spills or discharges escape from the sewerage system to the external environment, reported as per utility's licence.   | $SB63b \div (SB9 \div 100)$  |
| (32)                                    | Total Volume of Sewage Collected (ML)                      | Total volume transported through sewerage network.  | $\Sigma ST15$  |
| (32a)                                   | Volume of Trade Waste (ML)                                 | Network trade waste.  | $\Sigma ST34$  |
| (33)                                    | Percentage of Sewage Treated (%)                           | % of total sewage treated.  | $[\Sigma ST18 + \Sigma ST19] \times 100 \div \text{Col (32) Table 15}$   |
| (33a)                                   | % Sewage Treated that was Compliant                        | The number of scheduled samples that complied in the reporting period divided by the number of scheduled samples in the reporting period.                                       | $(\text{No. of scheduled samples complying with licence limits}) \times 100 \div \text{Total No. of scheduled samples in reporting period.}$ |
| (33b)                                   | STWs Compliant at all times                                | Compliance is where effluent from the sewage treatment plant meets the licence conditions prescribed by the environmental regulator.  | As per NPF   |
| (34)                                    | Percentage of Total Sewage Collected - Infiltration/Inflow | % of total sewage collected.  | $\Sigma ST31 \times 100 \div \Sigma ST15$  |
| (35)                                    | Percentage of Total Sewage Collected - Residential         | % of total sewage collected.  | $\Sigma ST32 \times 100 \div \Sigma ST15$  |
| (36)                                    | Percentage of Total Sewage Collected - Non-residential     | % of total sewage collected.  | $\Sigma ST33 \times 100 \div \Sigma ST15$  |
| (37)                                    | Percentage of Total Sewage Collected - Trade Waste         | % of total sewage collected.  | $\Sigma ST34 \times 100 \div \Sigma ST15$  |
| (38)                                    | Percentage of Total Sewage Collected - Other               | Remainder not reported under columns (34), (35), (36) or (37). % of total sewage collected.   | $100 - \text{Col (34)} - \text{Col (35)} - \text{Col (36)} - \text{Col (37) Table 15}$   |
| (39a)                                   | Level of Treatment - Primary Level                         | Primary treatment only.   | $[\Sigma ST17 \times 100] \div \text{Col (32) Table 15}$   |
| (39b)                                   | Level of Treatment - Secondary Level                       | Secondary treatment only.   | $[\Sigma ST18 \times 100] \div \text{Col (32) Table 15}$   |
| (39c)                                   | Level of Treatment - Tertiary Level                        | Tertiary treatment only.  | $[\Sigma ST19 \times 100] \div \text{Col (32) Table 15}$   |
| (39)                                    | Volume of Sewage Collected per property (kL/property)      | Includes residential, non-residential and trade waste.  | $\text{Col (32) Table 15} \div \text{Col (3) Table 14}$  |
| (40)                                    | Biosolids Reused (%)                                       | % of biosolids (sludge) to farmland, landfill etc.  | $\Sigma [ST27 \div 100 \times ST26] \div \Sigma ST26$  |
| (41a)                                   | Effluent Recycled - Total (ML)                             | Total volume recycled.  | $\Sigma ST25$  |
| (41b)                                   | Effluent Recycled - Urban Water (ML)                       | Total urban water recycled (excluding agricultural, environmental and bulk).  | $\Sigma [ST21 + ST22 + ST23 + ST24 + ST24a]$   |
| (41c)                                   | % of Effluent Recycled                                     | Percentage of effluent that is recycled.  | $100 \times \text{Col (41a)} \div \text{Col (32) Table 15}$  |

- Notes:**
- A. References to SB and ST (eg. SB9, ST32) refer to questions in each LWU's Sewerage Performance Monitoring Database.  $\Sigma ST17$  refers to the sum of values for each treatment works. Eg. refer to page 227.
  - B. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
  - C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.

Formulae for calculation of performance indicators in table 16

| 16. Sewerage - 2014/15 Financial, Efficiency |  |  |   |
|--|--|--|---|
| Column No.                                   | Performance Indicator  | Background to Formula  | Formula   |
| (42)   | Total Revenue (excl Capital Works Grants) (\$'000)                 | Total Revenue excluding grants for acquisition of assets, interest income and gain/loss on disposal of assets<br>[Residential Charges + Non-residential Charges + Trade Waste Charges + Extra Charges + Other Revenues + Grants (excluding receipts from government for Acquisition of Assets) + Contributions (Developer Charges + Developer Provided Assets + Other Contributions)]. | $(S_{14} - S_{10} - S_{12a}) \div 1000$   |
| (42a)  | Revenue per property (\$)  | Total revenue per connected property.  | $[Col (42) Table 16 \times 1000] \div [Col (3) Table 14]$                                     |
| (43)   | Residential Revenue (% of rates and charges total)                 | Where an LWU has not reported a breakdown of revenue from rates and charges and sales into residential and non-residential, the percentage revenue for such LWUs has been estimated from the reported percentages of similar LWUs.   | $(S_6) \times 100 \div (S_6 + S_7 + S_8)$   |
| (44)   | Residential Sewage (% of total collected excl infiltration/inflow) | % of total collected <u>excluding</u> infiltration and inflow.   | $[\Sigma ST32 \div (\Sigma ST15 - \Sigma ST31)] \times 100$                                   |
| (45)   | Written Down Replacement Cost (\$M)                                | Written down replacement cost of system assets.  | $S_{48} \div 1,000,000$   |
| (46)   | Current Replacement Cost (CRC) of System Assets (\$M)              | The value of the infrastructure assets expressed in terms of how much it would cost to construct modern assets to provide the same function (ie. MEERA - Modern Engineering Equivalent Replacement Asset).   | $S_{46} \div 1,000,000$   |
| (47)   | Current Replacement Cost per Assessment (\$)                       | The value of the infrastructure assets divided by the number of assessments.   | $S_{46} \div Col (1) Table 14$  |
| (48)   | Net Debt to Equity - W&S (%)                                       | All overdrafts, repayable borrowings, interest bearing non-repayable borrowings, advances and leases less cash & investments $\div$ total equity.  | $[(W_{36} + W_{38} - W_{30}) + (S_{37} + S_{39} - S_{31})] \times 100 \div (W_{44} + S_{45})$ |
| (48a)  | Return on Assets (%)   | See Col (9) in Table 7.  | From Col (9) Table 7  |
| (48b)  | Economic Real Rate of Return (%)                                   | See Col (11) in Table 7.   | From Col (11) Table 7   |
| (49a)  | Cross Subsidies (Annual Charges & Fees) (\$/assessment)            | Cross subsidies from residential customers to non-residential customers and trade waste dischargers.   | $(S_{28b} + S_{28c}) \div Col (1) Table 14$   |
| (49b)  | Cross Subsidies (Developer Charges) (\$/ET)                        | Cross subsidies in sewerage developer charges.   | $(S_{29b}) \div Col (1) Table 14$   |
| (50)   | Operating Result (\$/property)                                     | Total revenue less total expenses less grants for acquisition of assets divided by total number of connected properties.   | $(S_{16a}) \div Col (3) Table 14$   |
| (47a)  | Written Down Value of Current Replacement Cost per property (\$)   | The written down value of the infrastructure assets divided by the number of connected properties.   | $S_{48} \div Col (3) Table 14$  |
| (51)   | Externalities (\$/property)  | Sewage treatment works licence fees paid by LWUs to EPA.   | From EPA records  |
| (51a)  | Loan Payment (\$/property)   | Includes interest expenses, repayment of debt (Loans, Advances, Finance Leases).   | $(S_{4a} + S_{18a} + S_{18b} + S_{18c}) \div Col (3) Table 14$                                |
| (52)   | Operating Cost OMA (\$/property)                                   | Total operation, maintenance and administration costs divided by total number of connected properties.   | $[S_1 + S_2] \div Col (3) Table 14$   |
| (54)   | Management Cost (\$/property)                                      | Total management costs divided by total number of connected properties.  | $S_1 \div Col (3) Table 14$   |

- Notes:**
- A. References to SB and ST (eg. SB9, ST32) refer to questions in each LWU's Sewerage Performance Monitoring Database.  $\Sigma ST17$  refers to the sum of values for each treatment works. Eg. refer to page 227.
- B. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



Formulae for calculation of performance indicators in table 17

| 17. Sewerage - 2014/15 Environmental, Levels of Service |  |   |  |
|---|--|---|--|
| Column No.  | Performance Indicator                            | Background to Formula   | Formula  |
| (55)  | EPA Licence Compliance BOD (%)                   | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note B                                     |
| (56)  | BOD 90 Percentile Discharge Licence Limit (mg/L) | Some councils only have 100 percentile licence limits for their treatment works. In this case the 100 percentile limits should be reported.                                 | see note B                                     |
| (57)  | EPA Licence Compliance SS (%)                    | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note C                                     |
| (58)  | SS 90 Percentile Discharge Licence Limit (mg/L)  | Some councils only have 100 percentile licence limits for their treatment works. In this case the 100 percentile limits should be reported.                                 | see note C                                     |
| (59a)   | EPA Licence Compliance N (%)                     | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note B                                     |
| (59b)   | EPA Licence Compliance P (%)                     | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note B                                     |
| (59c)   | EPA Licence Compliance Oil & Grease (%)          | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note B                                     |
| (59d)   | EPA Licence Compliance Faecal Coliform (%)       | Compliance refers to the number of samples taken for system performance monitoring and not the number of tests.   | see note B                                     |
| (59e)   | Sewage Treated that was Compliant (%)            | Percent of sewage volume treated that was compliant.  | see note E                                     |
| (59f)   | STWs Compliant at all times                      | Number of treatment works compliant with licence conditions.  | see note F                                     |
| (60)  | Compliance with Environmental Regulator (Y/N)    |   | see note C                                     |
| (61)  | Odour Complaints (per 1000 properties)           | Odour complaints for treatment works, pumping stations and pipe network in your sewerage business.  | SB39 x 1000 ÷ Col (3) Table 14                 |
| (62)  | Service Complaints (per 1000 properties)         | Service complaints including chokes and odour, but excluding billing. Exclude queries.  | [SB38 + SB34 + SB39] x 1000 ÷ Col (3) Table 14 |
| (65)  | Average Sewerage Interruption (minutes)          | Measured from time when utility is aware that sewerage services are no longer available. Sum of total minutes of interruption divided by the total number of interruptions. | SB43   |

- Notes:**
- A. References to SB (eg. SB9) refer to questions in each LWU's Sewerage Performance Monitoring Database. Eg. refer to page 227.
- B. For multiple treatment works, the Licence Compliance indicators are calculated as a weighted average on the basis of the number of sampling days for each treatment works.
- ie. For BOD compliance, sum for all treatment works, the product of ST50 multiplied by ST63 for each treatment works.
- Divide this total by the sum of ST63 for all treatment works.
- C. SS compliance is calculated in a similar manner to BOD compliance.
- ie. For SS compliance, sum for all treatment works, the product of ST52 multiplied by ST63 for each treatment works.
- Divide the total by the sum of ST63 for all treatment works.
- D. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.
- E. From page 57 of the 2013-14 National Performance Framework.
- F. From page 59 of the 2013-14 National Performance Framework.



Formulae for calculation of performance indicators in table 18

| 18. Sewerage - 2014/15 Benchmarking Cost Data |  |  |  |
|---|--|--|--|
| Column No.                                    | Performance Indicator  | Background to Formula  | Formula  |
| (66a)   | Total O&M Cost (\$/property)   | Operation, Maintenance, Energy, Chemical, Effluent Management and Biosolids Management costs.                    | Col (66) + Col (67) + Col (68) + Col (69) + Col (69a) Table 18 |
| (66)  | Operating Cost Components - Maintenance (\$/property)                        | Maintenance cost of all sewerage system assets.  | [S_2b + S_2e + S_2k + S_2m] ÷ Col (3) Table 14                 |
| (67)  | Operating Cost Components - Operation (\$/property)                          | Operation cost of all sewerage system assets.  | [S_2a + S_2c + S_2f + S_2l] ÷ Col (3) Table 14                 |
| (68)  | Operating Cost Components - Energy (\$/property)                             | Energy cost of sewage treatment and pumping  | S_2h ÷ Col (3) Table 14  |
| (69)  | Operating Cost Components - Chemical Treatment (\$/property)                 | The chemical cost of sewage treatment.   | S_2g ÷ Col (3) Table 14  |
| (69a)   | Operating Cost Components - Effluent & Biosolids (\$/property)               | Effluent Management and Biosolids Management cost of sewage treatment.   | [S_2i + S_2j] ÷ Col (3) Table 14                               |
| (70)  | Operating Cost Components - Mains (\$/property)                              | Operation and Maintenance cost of sewage mains.  | [S_2a + S_2b] ÷ Col (3) Table 14                               |
| (71)  | Operating Cost Components - Pumping Stations (\$/property)                   | Operation, Energy and Maintenance cost of sewage pumping stations.   | [S_2c + S_2d + S_2e] ÷ Col (3) Table 14                        |
| (72)  | Operating Cost Components - Sewage Treatment (\$/property)                   | Operation, Chemical, Energy, Effluent Management, Biosolids Management and Maintenance cost of sewage treatment. | [S_2f + S_2g + S_2h + S_2i + S_2j + S_2k] ÷ Col (3) Table 14   |
| (73)  | Operating Cost Components - Other (\$/property)                              | Operation and maintenance cost of other sewerage system assets.  | [S_2l + S_2m] ÷ Col (3) Table 14                               |
| (74)  | Management Cost Components - Administration (\$/property)                    | Administration costs.  | S_1a ÷ Col (3) Table 14  |
| (75)  | Management Cost Components - Engineering & Supervision (\$/property)         | Engineering and Supervision costs.   | S_1b ÷ Col (3) Table 14  |
| (76a)   | Management Cost Components - Total (\$/property)                             | Administration, Engineering and Supervision costs.   | Col (74) + Col (75) Table 18                                   |
| (76)  | Management Cost Components - Total (c/kL)                                    | Management cost per kL of sewage treated.  | [S_1a + S_1b] x 100 ÷ Col (32) Table 15                        |
| (76b)   | Total OMA Cost (\$/property)   | Operation, Maintenance and Management costs.   | Col (66a) + Col (76a) Table 18                                 |
| (77)  | Wholesale Component (Treatment) (\$/property)                                | The cost of sewage treatment.  | [S_2f + S_2g + S_2h + S_2i + S_2j + S_2k] ÷ Col (3) Table 14   |
| (78)  | Retail Component (Reticulation) (\$/property)                                | The cost of transportation and reticulation.   | [S_2a + S_2b + S_2c + S_2d + S_2e] ÷ Col (3) Table 14          |
| (79)  | Pumping Cost Components - Total Sewage Pumping Cost (c/kL)                   | From special schedule No. 5.   | [S_2c + S_2d + S_2e] x 100 ÷ [Col (32) Table 15 x 1000]        |
| (80)  | Pumping Cost Components - Total Sewage Pumping Cost (\$'000/pumping station) | From special schedule No. 5.   | [S_2c + S_2d + S_2e] ÷ 1000 ÷ Col (11) Table 14                |
| (81)  | Pumping Cost Components - Operation (\$'000/pumping station)                 | From special schedule No. 5.   | [S_2c ÷ 1000] ÷ Col (11) Table 14                              |
| (82)  | Pumping Cost Components - Maintenance (\$'000/pumping station)               | From special schedule No. 5.   | [S_2e ÷ 1000] ÷ Col (11) Table 14                              |
| (83)  | Pumping Cost Components - Energy (\$'000/pumping station)                    | From special schedule No. 5.   | [S_2d ÷ 1000] ÷ Col (11) Table 14                              |
| (85)  | Sewer Main Cost Components - Total Sewer Main Cost (c/kL)                    | From special schedule No. 5.   | [S_2a + S_2b] x 100 ÷ [Col (32) Table 15 x 1000]               |
| (86)  | Sewer Main Cost Components - Total Sewer Main Cost (\$'000/100km)            | From special schedule No. 5.   | [S_2a + S_2b] ÷ 1000 ÷ [Col (8) Table 14 ÷ 100]                |
| (87)  | Sewer Main Cost Components - Operation (\$'000/100km)                        | From special schedule No. 5.   | [S_2a ÷ 1000] ÷ [Col (8) Table 14 ÷ 100]                       |
| (88)  | Sewer Main Cost Components - Maintenance (\$'000/100km)                      | From special schedule No. 5.   | [S_2b ÷ 1000] ÷ [Col (8) Table 14 ÷ 100]                       |
| (89)  | Treatment Cost Components - Total Sewage Treatment Cost (c/kL)               | From special schedule No. 5.   | [S_2f + S_2g + S_2h + S_2i + S_2j + S_2k] ÷ [10 x Col (32)]    |
| (90)  | Treatment Cost Components - Operation (\$/property)                          | From special schedule No. 5.   | [S_2f] ÷ Col (3) Table 14                                      |
| (91)  | Treatment Cost Components - Maintenance (\$/property)                        | From special schedule No. 5.   | [S_2k] ÷ Col (3) Table 14                                      |
| (92)  | Treatment Cost Components - Chemical (\$/property)                           | From special schedule No. 5.   | [S_2g] ÷ Col (3) Table 14                                      |

- Notes:**
- A. References to SB (eg. SB9) refer to questions in each LWU's Sewerage Performance Monitoring Database. Eg. refer to page 227.
- B. References to S\_ (eg. S\_16) refer to items in Special Schedules Nos 5 and 6 of each LWU's Annual Financial Statements. Note that dollar values in the Special Schedules are reported in \$'000 whereas the whole dollar value is used in these Tables and formulae.
- C. Where LWU data is missing or ambiguous, the figure has been determined from other supporting information in accordance with section H2 on page 351.



APPENDIX C: 2014-15 LOCAL WATER UTILITY TBL PERFORMANCE REPORTS

Coffs Harbour City Council Water Supply TBL Report (Page 1)

| Coffs Harbour City Council | TBL Water Supply Performance | 2014-15 |
|----------------------------|------------------------------|---------|
|----------------------------|------------------------------|---------|

WATER SUPPLY SYSTEM - Coffs Harbour City Council serves a population of 71,300 (25,060 connected properties). Water is sourced from the Nymboida River (part of the Regional Water Supply which includes Shannon Creek Dam) and also from the Orara River. Water is transferred to Karangi Dam where it is treated and supplied to the Coffs Harbour area which stretches from Sawtell to Corindi. Council has 2 storage dams at Karangi and Woolgoolga (total storage capacity 5,870ML), not including the 30,000ML Shannon Creek Dam. Council has 2 smaller systems providing treated water to Coramba and Nana Glen villages. The water supply network comprises a dissolved air flotation treatment works, a conventional water treatment works and a chlorinator, 18 service reservoirs (88 ML), 7 pumping stations, 43 ML/d delivery capacity into the distribution system, 157 km of transfer and trunk mains and 478 km of reticulation. 95% of water supplied is potable and 5% nonpotable (recycled).

PERFORMANCE - Coffs Harbour City Council achieved 100% implementation of the outcomes required by the NSW BPM Framework. The 2015-16 typical residential bill was \$588 which was close to the statewide median of \$593 (Indicator 14). The economic real rate of return was similar to the statewide median (indicator 43). The operating cost (OMA) per property was \$395 which was close to the statewide median of \$400 (Indicator 49). Water quality complaints were negligible compared to the statewide median of 3 (Indicator 25). Compliance was achieved for microbiological water quality (100% of the population, 3 of 3 zones compliant), chemical water quality and physical water quality. There were no failures of the chlorination system or the treatment system. Coffs Harbour City Council reported no water supply public health incidents. Current replacement cost of system assets was \$423M (\$15,900 per assessment). Cash and investments were \$29.4M, debt was \$77M and revenue was \$22M (excluding capital works grants).

IMPLEMENTATION OF OUTCOMES REQUIRED BY THE NSW BEST-PRACTICE MANAGEMENT (BPM) FRAMEWORK

|  |                   |  |      |
|--|-------------------|--|------|
| (1) Complete Current Strategic Business Plan & Financial Plan              | YES <sup>12</sup> | (3) Sound water conservation implemented             | YES  |
| (2) (2a) Pricing - Full Cost Recovery, without significant cross subsidies | Yes               | (4) Sound drought management implemented             | YES  |
| (2b,2c) Pricing - Appropriate Residential Charges                          | Yes               | (5) Complete performance reporting (by 15 September) | YES  |
| (2d) Pricing - Appropriate Non-residential Charges                         | Yes               | (6) Integrated water cycle management strategy       | YESC |
| (2e) Pricing - DSP with Commercial Developer Charges                       | Yes               | IMPLEMENTATION OF ALL OUTCOMES                       | 100% |

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

|               |                             | NW1  |     | No.  |   | LWU                          |       | RANKING            |   | MEDIAN    |       |
|---------------|-----------------------------|------|-----|--|---|------------------------------|-------|--------------------|---|-----------|-------|
|               |                             |      |     |  |   | RESULT                       |       | >10,000 properties |   | Statewide |       |
|               |                             |      |     |  |   | Col 1                        |       | Note 1             |   | Note 3    |       |
|               |                             |      |     |  |   |                              |       | Col 2              |   | Col 4     |       |
|               |                             |      |     |  |   |                              |       | Col 3              |   | Col 5     |       |
| UTILITY       | CHARACTERISTICS             | C1   | 1   | Population served:   | 71300   |                              |       |                    |   |           |       |
|               |                             | C4   | 2   | Number of connected properties:  | 25060   | Number of assessments: 26660 |       |                    |   |           |       |
|               |                             |      | 3   | Residential connected properties (% of total)  |   | %                            | 94    |                    |   | 92        |       |
|               |                             |      | 4   | New residences connected to water supply (%)   |   | %                            | 1.6   | 2                  | 1 | 1.1       |       |
|               |                             | A3   | 5   | Properties served per kilometre of water main  |   | Prop/km                      | 40    |                    |   | 31        | 34    |
|               |                             |      | 6   | Rainfall (% of median annual rainfall)   |   | %                            | 145   | 1                  | 1 | 116       |       |
|               |                             | W11  | 7   | Total urban water supplied at master meters (ML)   |   | ML                           | 6,100 |                    |   | 7,000     | 9,060 |
|               |                             |      | 8   | Peak week to average consumption (%)   |   | %                            | 120   | 1                  | 1 | 141       |       |
|               |                             |      | 9   | Renewals expenditure (% of current replacement cost of system assets)                    |   | %                            | 0.0   | 5                  | 5 | 0.4       |       |
|               |                             |      | 10  | Employees per 1000 properties  |   | per 1,000 prop               | 1.9   | 4                  | 3 | 1.4       |       |
| SOCIAL        | CHARGES & BILLS             | P1   |     | Residential tariff structure for 2015-16:  | inclining block; independent of land value; access charge \$143 |                              |       |                    |   |           |       |
|               |                             | P1.3 | 12a | Residential water usage charge for 2014-15 for usage <365 kL (c/kL)                      | c/kL (2014-15)  | 263                          |       | 2                  | 1 | 213       | 185   |
|               |                             |      | 12  | Residential water usage charge for 2015-16 for usage <365 kL (c/kL)                      | c/kL (2015-16)  | 267                          |       | 2                  | 1 | 226       |       |
|               |                             | P3   | 14a | Typical residential bill for 2014-15 (\$/assessment)                                     | \$ (2014-15)  | 582                          |       | 4                  | 2 | 566       | 589   |
|               |                             |      | 14  | Typical residential bill for 2015-16 (\$/assessment)                                     | \$ (2015-16)  | 588                          |       | 3                  | 2 | 593       |       |
|               |                             |      | 15  | Typical developer charge for 2015-16 (\$/equivalent tenement)                            | \$ (2015-16)  | 10,100                       |       | 1                  | 1 | 5,900     |       |
|               |                             | F4   | 16  | Residential revenue from usage charges (% of residential bills)                          | %   | 76                           |       | 1                  | 1 | 72        | 66    |
|               |                             | F5   | 17  | Revenue per property - water (\$/property)   | \$/prop   | 880                          |       | 3                  | 3 | 827       | 881   |
|               | HEALTH                      |      | 18  | Water Supply Coverage (% of Urban Population with reticulated WS)                        | % of population   | 99.5                         |       | 3                  | 2 | 99.5      |       |
|               |                             |      | 18a | Risk based Drinking Water Management System (DWMS)?                                      | Yes/No  | Yes                          |       |                    |   |           |       |
|               |                             |      | 19  | Physical compliance achieved? Note 10  | Yes/No  | Yes                          |       | 1                  | 1 |           |       |
|               |                             |      | 19a | Chemical compliance achieved? Note10   | Yes/No  | Yes                          |       | 1                  | 1 |           |       |
|               |                             | H4   | 19b | % population with chemical compliance  | % of population   | 100                          |       | 1                  | 1 | 100       |       |
|               |                             |      | 20  | Microbiological (E. coli) compliance achieved? Note 10                                   | Yes/No  | Yes                          |       | 1                  | 1 |           |       |
|               | SERVICE LEVELS              | H3   | 20a | % population with microbiological compliance   | % of population   | 100                          |       | 1                  | 1 | 100       | 100   |
|               |                             | C9   | 25  | Water quality complaints per 1000 properties   | per 1,000 prop  | 0                            |       | 1                  | 1 | 3         | 2     |
|               |                             | C10  | 26  | Water service complaints per 1000 properties   | per 1,000 prop  | 0.1                          |       | 1                  | 1 | 6         | 0     |
|               |                             | C17  | 27  | Incidence of unplanned interruptions per 1000 properties                                 | per 1,000 prop  | 11                           |       | 2                  | 2 | 24        | 91    |
|               |                             | C15  | 28  | Average duration of interruption (min)   | min   | 120                          |       | 1                  | 2 | 133       | 117   |
|               |                             | A8   | 30  | Number of water main breaks per 100 km of water main                                     | per 100km   | 3                            |       | 1                  | 1 | 9         | 13    |
|               |                             |      | 31  | Drought water restrictions (% of time)   | % of time   | 0                            |       | 1                  | 1 | 0         |       |
|               |                             |      | 32  | Total days lost (%)  | %   | 3.2                          |       | 3                  | 4 | 2.9       |       |
| ENVIRONMENTAL | NATURAL RESOURCE MANAGEMENT | W12  | 33  | Average annual residential water supplied - STATEWIDE (kL/property)                      | kL/prop   | 167                          |       | 3                  | 2 | 166       | 181   |
|               |                             | 33a  |     | Average annual residential water supplied - COASTAL LWUs (kL/property)                   | kL/prop   | 167                          |       | 4                  | 4 | 150       |       |
|               |                             | 33b  |     | Average annual residential water supplied - INLAND LWUs (kL/property)                    | kL/prop   |                              |       |                    |   | 225       |       |
|               |                             | A10  | 34  | Real losses (leakage) (L/service connection/day)   | L/connection/day  | 50                           |       | 2                  | 2 | 60        | 76    |
|               |                             |      | 35  | Energy consumption per Megalitre (kiloWatt hours)  | kWh/ML  | 489                          |       | 2                  | 3 | 700       |       |
|               |                             |      | 36  | Renewable energy consumption (% of total energy consumption)                             | %   | 0                            |       |                    |   | 0         |       |
| ECONOMIC      | FINANCE                     | E12  | 36a | Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 properties) | t CO2   | 490                          |       | 5                  | 5 | 410       | 393   |
|               |                             |      | 42  | Current replacement cost per assessment (\$)   | \$/assessment   | 15,900                       |       | 3                  | 3 | 16,400    |       |
|               |                             | F17  | 43  | Economic real rate of return - Water (%)   | %   | 2.0                          |       | 1                  | 2 | 1.6       | 1.9   |
|               |                             |      | 44  | Return on assets - Water (%)   | %   | 0.6                          |       | 4                  | 4 | 1.0       |       |
|               |                             | F22  | 45  | Net Debt to equity - WS & Sge (%)  | %   | 13                           |       | 1                  | 1 | -1        | 11    |
|               |                             | F23  | 46  | Interest cover - WS & Sge  |   | 1                            |       | 3                  | 3 | 4         | 2     |
|               |                             |      | 47  | Loan payment per property - Water (\$)   | \$/prop   | 454                          |       | 1                  | 1 | 69        |       |
|               |                             | F24  | 47b | Net profit after tax - WS & Sge (\$'000)   | \$'000  | -3,270                       |       | 5                  | 5 | 2340      | 7120  |
|               | EFFICIENCY                  |      | 48  | Operating cost (OMA) per 100km of main (\$'000)  | \$'000  | 1,580                        |       | 4                  | 4 | 1,320     |       |
|               |                             | F11  | 49  | Operating cost (OMA) per property (\$/prop) Note 8                                       | \$/prop   | 395                          |       | 2                  | 1 | 400       | 455   |
|               |                             |      | 50  | Operating cost (OMA) per kilolitre (cents)   | c/kL  | 161                          |       | 4                  | 4 | 129       |       |
|               |                             |      | 51  | Management cost (\$/prop)  | \$/prop   | 153                          |       | 4                  | 3 | 141       |       |
|               |                             |      | 52  | Treatment cost (\$/prop)   | \$/prop   | 76                           |       | 4                  | 2 | 58        |       |
|               |                             |      | 53  | Pumping cost (\$/prop)   | \$/prop   | 13                           |       | 2                  | 1 | 31        |       |
|               |                             |      | 54  | Energy cost (\$/prop)  | \$/prop   | 9                            |       | 2                  | 1 | 18        |       |
|               |                             |      | 55  | Water main cost (\$/prop)  | \$/prop   | 93                           |       | 4                  | 4 | 74        |       |
|               |                             | F28  | 56  | Capital Expenditure (\$/prop)  | \$/prop   | 53                           |       | 5                  | 4 | 155       | 163   |

- NOTES :
- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with >10,000 properties).
  - Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs).
  - Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
  - Col 5 (National Median) is the median value for the 76 utilities reporting water supply performance in the National Performance Report 2014-15 (www.bom.gov.au).
  - LWUs are required to annually review key projections & actions in the later of their IWCM Strategy and financial plan and their Strategic Business Plan and to annually 'roll forward', review and update their 30-year total asset management plan (TAMP) and 30-year financial plan.
  - 2015-16 Non-residential Tariff: Access Charge based on Meter Size: 40mm \$572, Two Part Tariff: Usage Charge 267c/kL.
  - Non-residential water supplied was 25% of potable water supplied excluding non-revenue water.  
Non-residential revenue was 24% of annual rates and charges, indicating fair pricing of services between the residential and non-residential sectors.
  - The operating cost (OMA) per property was \$395. Components were: management (\$153), operation (\$108), maintenance (\$104), energy (\$9) & chemical (\$17).
  - Rehabilitations included 0.3% of water mains, 0.14% of service connections and 5.8% of water meters. Renewals expenditure was \$12,000/100km of main.
  - Compliance with ADWG 2011 for drinking water quality is shown as "Yes" if compliance has been achieved (indicators 19, 19a & 20).
  - Coffs Harbour City Council has 3 fully qualified water treatment operators who meet the requirements of the National Certification Framework.
  - As Council's IWCM Strategy is over 6 years old, it will need to prepare a new 30-year IWCM Strategy, financial plan and report in accordance with the July 2014 IWCM Check List (www.water.nsw.gov.au).

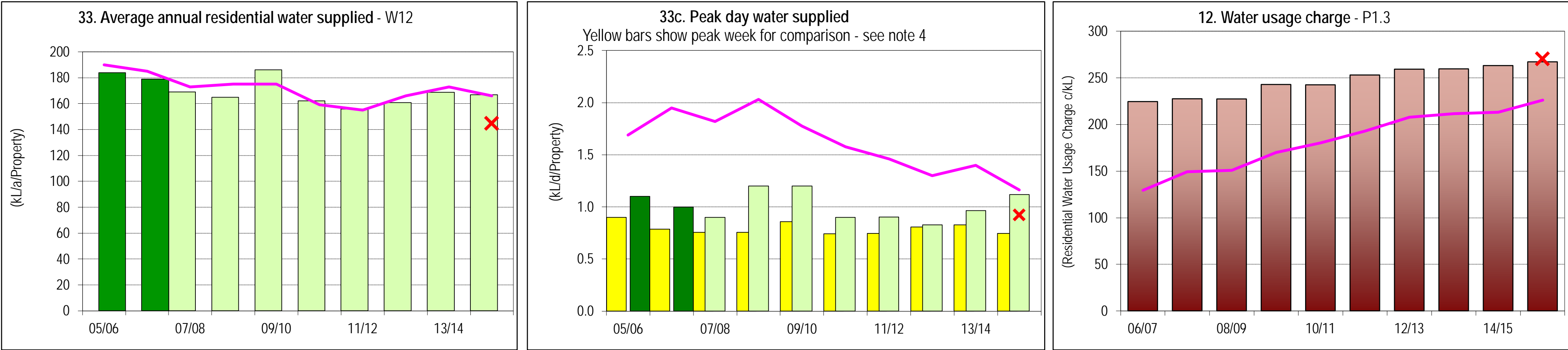


Coffs Harbour City Council Water Supply TBL Report (Page 2)

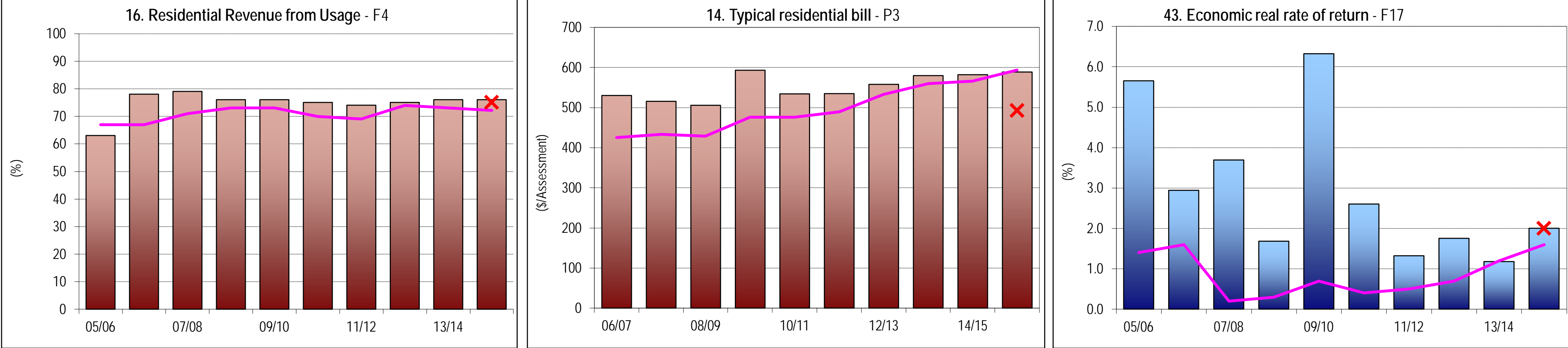
Coffs Harbour City Council TBL Water Supply Performance (page 2) 2014-15

(Results shown for 10 years together with Statewide Median and 2014-15 Top 20%)

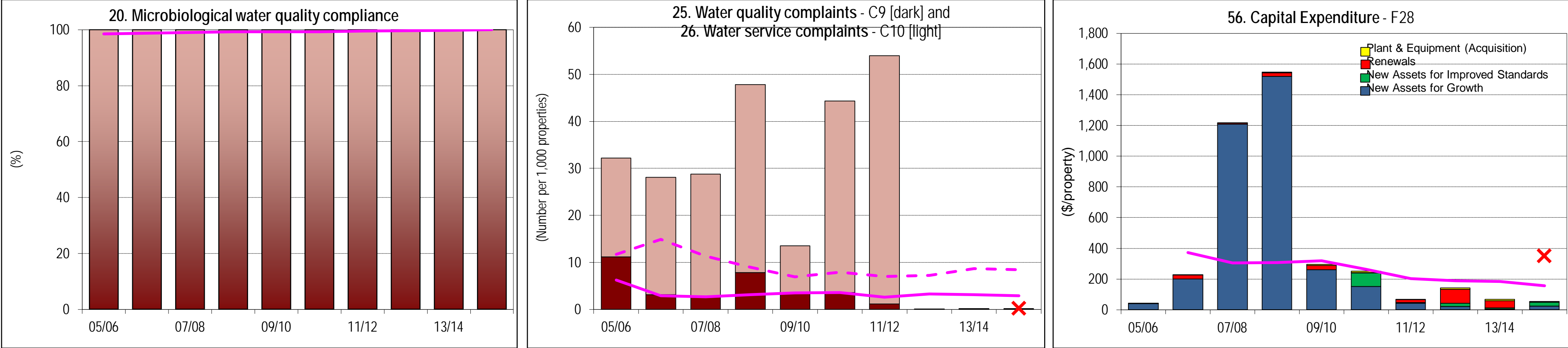
RESIDENTIAL USE/REVENUE FROM USAGE



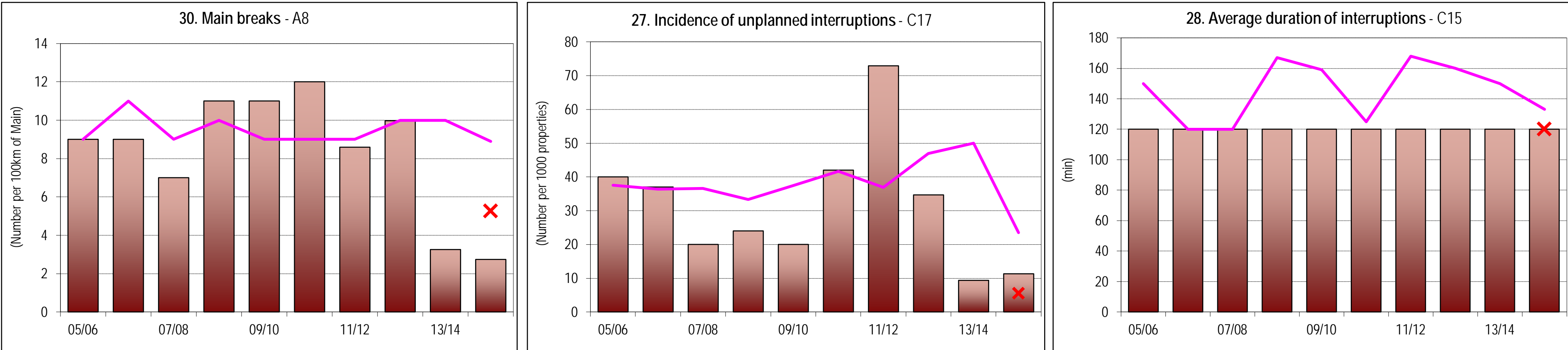
COST RECOVERY



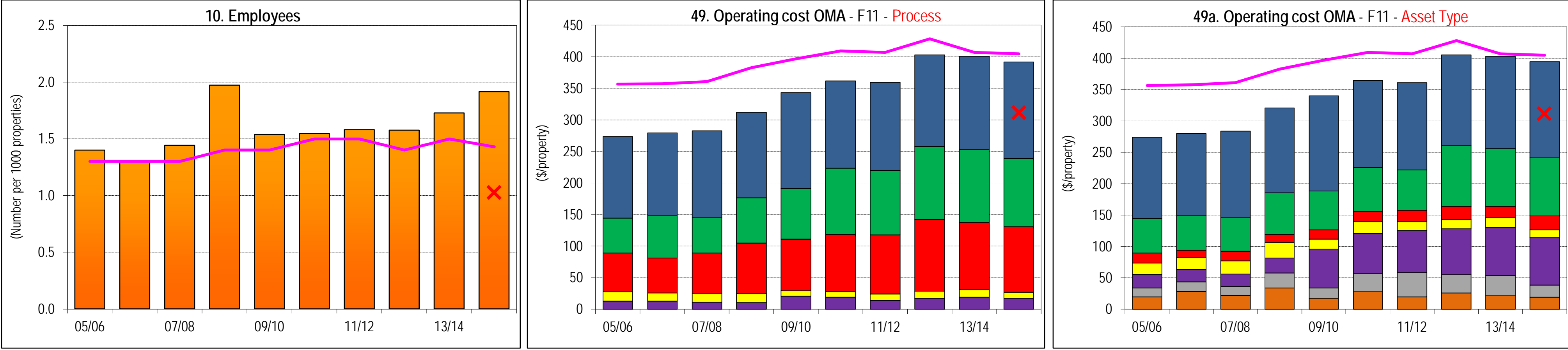
WATER QUALITY/CUSTOMER SERVICE/CAPITAL EXPENDITURE



RELIABILITY



EFFICIENCY



NOTES:

- Costs are in Jan 2015\$ except for graphs 12 and 14, which are in Jan 2016\$.
- Microbiological water quality compliance 1999-00 to 2003-04 was on the basis of 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines for E. coli; from 2004-05 to 2010-11 compliance was on the basis of the 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) and for 2011-12 to 2014-15 compliance was on the basis of the 2011 ADWG.
- Indicators 33 and 33c - Green shading of bars shows % of time Drought Water Restrictions applied in each year:
- Indicator 33c - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied shown in green.

LEGEND

State Median for all years

Top 20% for 2014-15

0 - 30% 30-50% >50% of time



Coffs Harbour City Council Sewerage TBL Report (Page 1)

Coffs Harbour City CouncilTBL Sewerage Performance2014-15

SEWERAGE SYSTEM - Coffs Harbour City Council serves a population of 70,200 (23,710 connected properties) and has 5 sewage treatment works providing secondary, advanced secondary, tertiary and advanced tertiary treatment. The system comprises 114,500 EP treatment capacity (Intermittent and Continuous Extended Aeration (Activated Sludge) and Biological Nutrient Removal), 117 pumping stations, 188 km of rising mains and 513 km of gravity trunk mains and reticulation. 14% of effluent was recycled (Indicator 27).

PERFORMANCE - Residential growth for 2014-15 was 1.3% which is higher than the statewide median. Coffs Harbour City Council achieved 100% implementation of the outcomes required by the NSW BPM Framework. The 2015-16 typical residential bill was \$806 which was above the statewide median of \$697 (Indicator 12). The economic real rate of return was 0.1% which was less than the statewide median (Indicator 46). The operating cost per property (OMA) was \$619 which was well above the statewide median of \$420 (Indicator 50). Sewage odour complaints were less than the statewide median of 0.8 (Indicator 21). Coffs Harbour Council reported 5 Category 2 (limited impact) environmental incidents. Council complied with the requirements of the environmental regulator for effluent discharge. The current replacement cost of system assets was \$659M (\$25,800 per assessment), cash and investments were \$48M, debt was \$93M and revenue was \$28.6M (excluding capital works grants).

IMPLEMENTATION OF OUTCOMES REQUIRED BY THE NSW BEST-PRACTICE MANAGEMENT (BPM) FRAMEWORK

|  |                   |  |                    |
|--|-------------------|--|--------------------|
| (1) Complete current strategic business plan & financial plan          | YES <sup>11</sup> | (2e) Pricing - DSP with commercial developer charges | Yes                |
| (2) (2a) Pricing - Full Cost Recovery without significant cross subsid | Yes               | (2f) Pricing - Liquid trade waste approvals & policy | Yes                |
| (2b) Pricing - Appropriate Residential Charges                         | Yes               | (3) Complete performance reporting (by 15 September) | YES                |
| (2c) Pricing - Appropriate Non-Residential Charges                     | Yes               | (4) Integrated water cycle management strategy       | YESC <sup>11</sup> |
| (2d) Pricing - Appropriate Trade Waste Fees and Charges                | Yes               | IMPLEMENTATION OF ALL OUTCOMES                       | 100%               |

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

| NW1           |                             | No.  |     |  | LWU                           | RANKING            |          | MEDIANS   |          |
|---------------|-----------------------------|------|-----|--|-------------------------------|--------------------|----------|-----------|----------|
|               |                             |      |     |  | RESULT                        | >10,000 properties | All LWUs | Statewide | National |
| UTILITY       | CHARACTERISTICS             | C5   | 1   | Population served: 70,200  |                               |                    |          |           |          |
|               |                             | C8   | 2   | Number of connected properties: 23,710   | Number of assessments: 25,500 |                    |          |           |          |
|               |                             | C6   | 3   | Number of residential connected properties: 22,200   |                               |                    |          |           |          |
|               |                             |      | 4   | New residences connected to sewerage (%)   | %                             | Col 1              | Note 1   | Note 2    | Note 3   |
|               |                             | A6   | 5   | Properties served per kilometre of main  | Prop/km                       | Col 2              | Col 3    | Col 4     | Note 4   |
|               |                             | W18  | 6   | Volume of sewage collected (ML)  | ML                            |                    |          |           | Col 5    |
|               |                             |      | 7   | Renewals expenditure (% of current replacement cost of system assets)                      | %                             |                    |          |           |          |
|               |                             |      | 8   | Employees per 1000 properties  | per 1,000 prop                |                    |          |           |          |
| SOCIAL        | CHARGES & BILLS             | P4   |     | Description of residential tariff structure: access charge/prop; independent of land value |                               |                    |          |           |          |
|               |                             | P4.1 | 11a | Residential access charge for 2014-15 (\$/assessment)                                      | \$ 2014-15                    |                    |          |           |          |
|               |                             |      | 11  | Residential access charge for 2015-16 (\$/assessment)                                      | \$ 2015-16                    |                    |          |           |          |
|               |                             | P6   | 12a | Typical residential bill for 2014-15 (\$/assessment)                                       | \$ 2014-15                    |                    |          |           |          |
|               |                             |      | 12  | Typical residential bill for 2015-16 (\$/assessment)                                       | \$ 2015-16                    |                    |          |           |          |
|               | HEALTH                      |      | 13  | Typical developer charge for 2015-16 (\$/equivalent tenement)                              | \$ 2015-16                    |                    |          |           |          |
|               |                             |      | 14  | Non-residential sewer usage charge (c/kL)  | c/kL                          |                    |          |           |          |
|               |                             | F6   | 15  | Revenue per property - Sge (\$)  | \$/prop                       |                    |          |           |          |
|               |                             |      | 16  | Sewerage Coverage (% of Urban Population with Reticulated Sge Service)                     | %                             |                    |          |           |          |
|               |                             | E3   | 17  | Percent of sewage treated to a tertiary level (%)  | %                             |                    |          |           |          |
|               | SERVICE LEVELS              |      | 18  | Percent of sewage volume treated that was compliant (%)                                    | %                             |                    |          |           |          |
|               |                             |      | 19  | Number of sewage treatment works compliant at all times                                    | 5 of 5                        |                    |          |           |          |
|               |                             |      | 21  | Odour complaints per 1000 properties   | per 1,000 prop                |                    |          |           |          |
|               |                             | C11  | 22  | Service complaints - sewerage per 1000 properties  | per 1,000 prop                |                    |          |           |          |
|               |                             | C16  | 23a | Average sewerage interruption (minutes)  | min                           |                    |          |           |          |
| ENVIRONMENTAL | NATURAL RESOURCE MANAGEMENT |      | 25  | Total days lost (%)  | %                             |                    |          |           |          |
|               |                             | W19  | 26  | Volume of sewage collected per property (kL)   | kL/prop                       |                    |          |           |          |
|               |                             | W26  | 26a | Total recycled water supplied (ML)   | ML                            |                    |          |           |          |
|               |                             | W27  | 27  | Recycled water (% of effluent recycled)  | %                             |                    |          |           |          |
|               |                             | E8   | 28  | Biosolids reuse (%)  | %                             |                    |          |           |          |
|               | ENVIRONMENTAL PERFORMANCE   |      | 30  | Energy consumption - sewerage (kWh/ML)   | kWh/ML                        |                    |          |           |          |
|               |                             |      | 31  | Renewable energy consumption (% of total energy consumption)                               | %                             |                    |          |           |          |
|               |                             | E12  | 32  | Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 properties)   | t CO2                         |                    |          |           |          |
|               |                             |      | 33  | 90 <sup>th</sup> Percentile licence limits for effluent discharge:                         |                               |                    |          |           |          |
|               |                             |      | 34  | Compliance with BOD in licence (%)   | %                             |                    |          |           |          |
|               |                             |      | 35  | Compliance with SS in licence (%)  | %                             |                    |          |           |          |
|               |                             | A14  | 36  | Sewer main breaks and chokes (per 100 km of main)  | per 100km main                |                    |          |           |          |
| ECONOMIC      | FINANCE                     |      | 37a | Sewer overflows (per 100 km of main)   | per 100km main                |                    |          |           |          |
|               |                             | E13  | 37b | Sewer overflows reported to environmental regulator (per 100km of main)                    | per 100km main                |                    |          |           |          |
|               |                             |      | 39  | Non res & trade waste % of total sge volume  | %                             |                    |          |           |          |
|               |                             |      | 43  | Revenue from non-residential plus trade waste charges (% of total revenue)                 | %                             |                    |          |           |          |
|               |                             |      | 44  | Revenue from trade waste charges (% of total revenue)                                      | %                             |                    |          |           |          |
|               | EFFICIENCY                  | F18  | 46  | Economic real rate of return - Sge (%)   | %                             |                    |          |           |          |
|               |                             |      | 46a | Return on assets - Sge (%)   | %                             |                    |          |           |          |
|               |                             |      | 48a | Loan payment per property - Sge (\$)   | \$/prop                       |                    |          |           |          |
|               |                             | F24  | 48b | Net profit after tax - WS & Sge (\$'000)   | \$'000                        |                    |          |           |          |
|               |                             |      | 49  | Operating cost (OMA) per 100 km of main (\$'000)   | \$'000                        |                    |          |           |          |
|               |                             | F12  | 50  | Operating cost (OMA) per property (\$) (Note 9)  | \$/prop                       |                    |          |           |          |
|               |                             |      | 51  | Operating cost (OMA) per kL (cents)  | c/kL                          |                    |          |           |          |
|               |                             |      | 52  | Management cost per property (\$)  | \$/prop                       |                    |          |           |          |
|               |                             |      | 53  | Treatment cost per property (\$)   | \$/prop                       |                    |          |           |          |
|               |                             |      | 54  | Pumping cost per property (\$)   | \$/prop                       |                    |          |           |          |
|               |                             |      | 55  | Energy cost per property (\$)  | \$/prop                       |                    |          |           |          |
|               |                             |      | 56  | Sewer main cost per property (\$)  | \$/prop                       |                    |          |           |          |
|               |                             | F29  | 57  | Capital Expenditure per property - Sewerage (\$)   | \$/prop                       |                    |          |           |          |

NOTES :

- 1 Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with >10,000 properties).
- 2 Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs). - see attachment.
- 3 Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
- 4 Col 5 (National Median) is the median value for the 75 utilities reporting sewerage performance in the National Performance Report 2014-15 (www.bom.gov.au).
- 5 LWUs are required to annually review key projections & actions in the later of their IWCM Strategy and financial plan and their Strategic Business Plan and to annually 'roll forward', review and update their 30-year total asset management plan (TAMP) and 30-year financial plan.
- 6 Non-residential access charge - \$789 x MF x SDF (MF - meter factor = [water meter size (mm)/20]^2 SDF - sewage discharge factor). Sewer usage charge - 209 c/kL.
- 7 Non-residential revenue was 21% of revenue from access, usage & trade waste charges. The sewage collected (residential, non-residential & trade waste) was not reported.
- 8 Compliance with Total N in Licence was 100%. Compliance with Total P in Licence was 100%.
- 9 Operating cost (OMA)/property was \$619. Components were: management (\$201), operation (\$122), maintenance (\$149), energy (\$78), chemical (\$15) & effluent/biosolids (\$55).
- 10 Coffs Harbour City Council rehabilitations included 0.7% of its sewerage mains and 0.2% of its service connections. Renewals expenditure was \$23,000/100km of main.
- 11 As Council's IWCM Strategy is over 6 years old, it will need to prepare a new 30-year IWCM Strategy, financial plan & report in accordance with the July 2014 IWCM Check List (www.water.nsw.gov.au).
- 12 Council has 5 fully qualified wastewater treatment operators who meet the NSW Certification requirements. 93% of employees received 2 or more days of training.

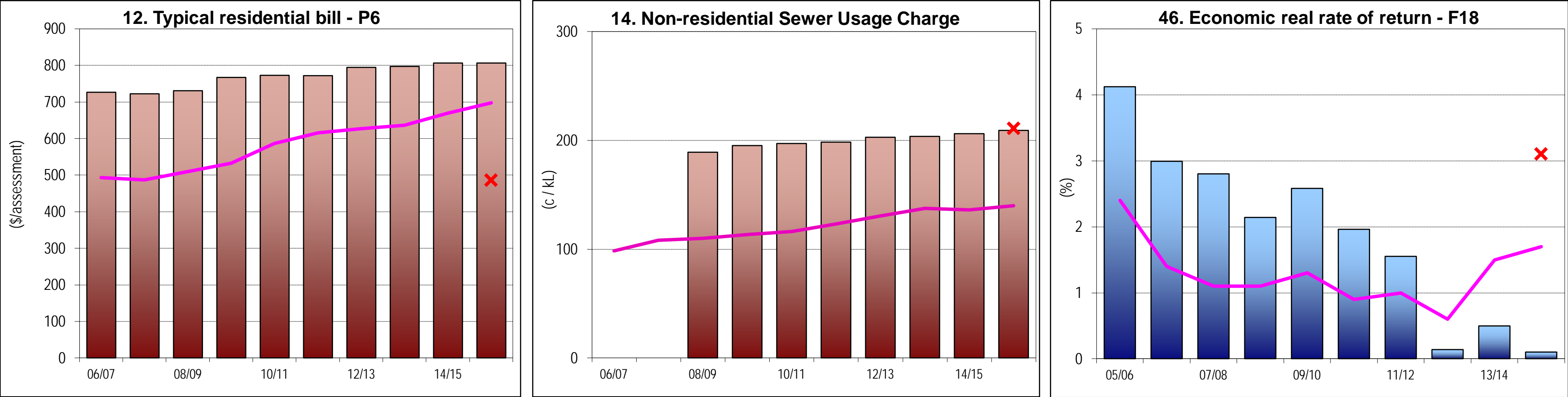


Coffs Harbour City Council Sewerage TBL Report (Page 2)

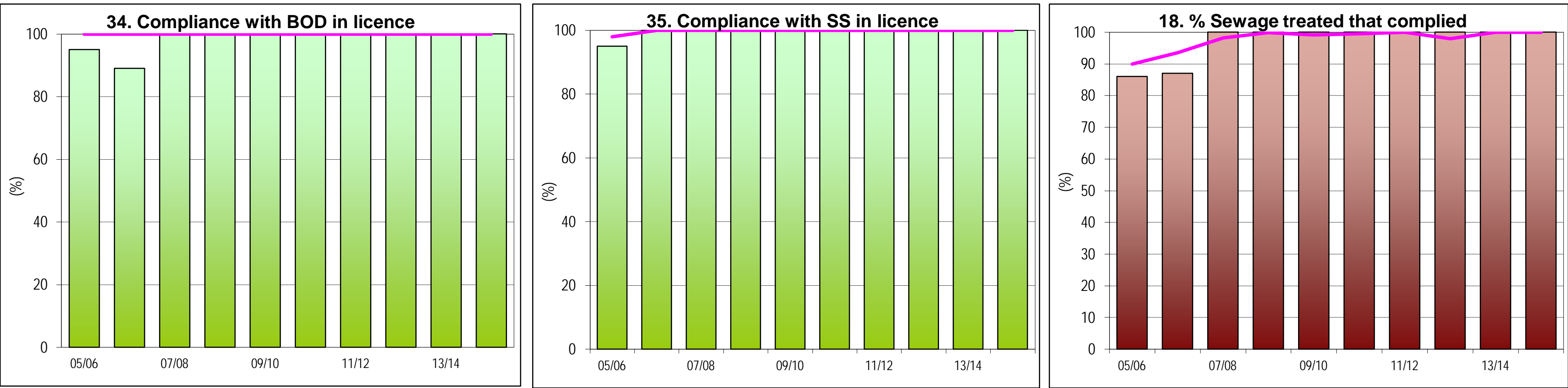
Coffs Harbour City Council TBL Sewerage Performance (page 2) 2014-15

(Results shown for 10 years together with Statewide Median and 2014-15 Top 20%)

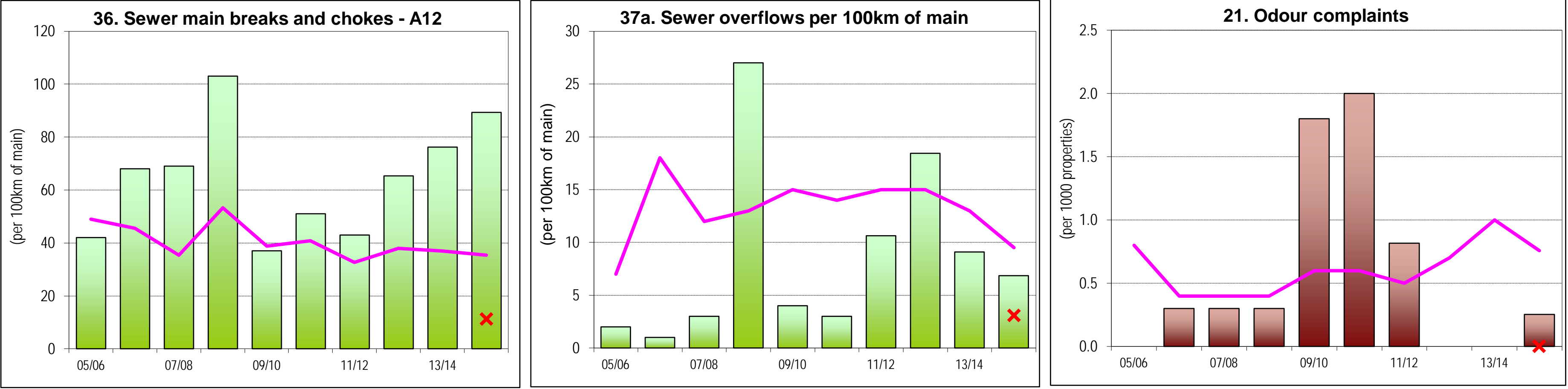
COST RECOVERY



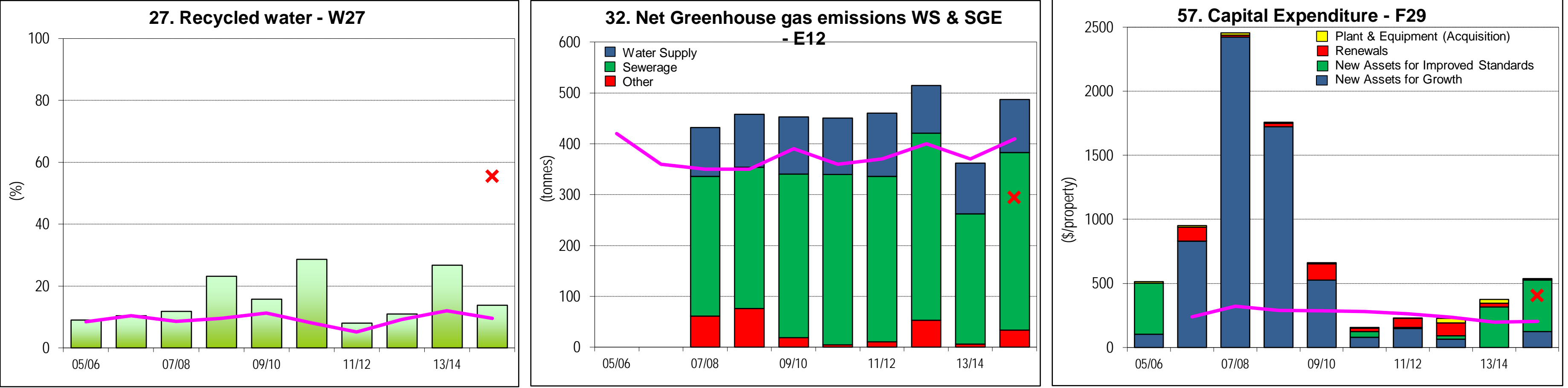
COMPLIANCE



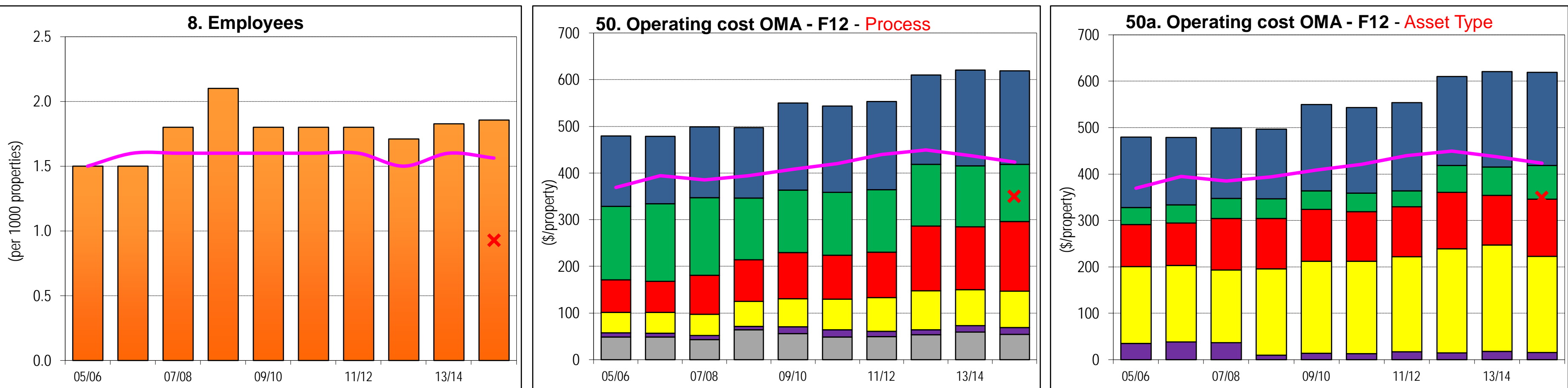
CUSTOMER SERVICE/RELIABILITY



ENVIRONMENT/CAPITAL EXPENDITURE



EFFICIENCY



NOTES:

1. Costs are in Jan 2015\$ except for graphs 12 and 14, which are in Jan 2016\$.

LEGEND  
State Median for all years  
Top 20% for 2014-15

Water Performance Percentiles (% of LWUs Basis) 2014-15

| NSW Regional Percentiles <sup>1,2</sup> |         |  |        |        |            |        |        | National Reporting <sup>3</sup> |  |
|---|---------|--|--------|--------|------------|--------|--------|---------------------------------|--|
| NWI No.                                 | NSW No. | UTILITY CHARACTERISTICS  | 20%    | 40%    | 50% Median | 60%    | 80%    | NWI No.                         | National Median Utilities with >10,000 props |
|   | 3       | Residential connected properties (% of total)                                    | 92     | 90     | 88         | 88     | 85     |                                 |  |
|   | 4       | New Residential Dwellings Connected to Water Supply (%)                          | 1.6    | 1.0    | 0.9        | 0.8    | 0.4    |                                 |  |
| A3                                      | 5       | Properties Served per km of Main   | 34     | 28     | 27         | 24     | 18     | A3                              | 34   |
|   | 6       | Rainfall (% of average annual rainfall)  | 118    | 102    | 98         | 93     | 81     |                                 |  |
| W11                                     | 7       | Total Urban Water Supplied (at Master Meters - ML)                               | 4,500  | 2,700  | 1,800      | 1,300  | 700    | W11                             | 9,060  |
|   | 8       | Peak Week to Average Consumption (%)   | 130    | 145    | 153        | 164    | 191    |                                 |  |
|   | 9       | Renewals Expenditure (% of current replacement cost of system assets)            | 1.2    | 0.7    | 0.5        | 0.4    | 0.2    |                                 |  |
|   | 10      | Employees (employees per 1000 properties)  | 1.3    | 1.6    | 1.7        | 2.0    | 2.6    |                                 |  |
| SOCIAL - Charges/Bills                  |         |  |        |        |            |        |        |                                 |  |
| P1.3                                    | 12a     | Residential Water Usage Charge (c/kL for 2014-15)                                | 241    | 203    | 179        | 154    | 118    | P1.3                            | 185  |
|   | 12      | Residential Water Usage Charge (c/kL for 2015-16)                                | 267    | 211    | 190        | 163    | 120    |                                 |  |
| P3                                      | 14a     | Typical Residential Bill (\$/assessment for 2014-15)                             | 539    | 590    | 662        | 690    | 805    | P3                              | 589  |
|   | 14      | Typical Residential Bill (\$/assessment for 2015-16)                             | 567    | 629    | 691        | 732    | 841    |                                 |  |
|   | 15a     | Typical Developer Charge (\$/equivalent tenement for 2014-15)                    | 7,700  | 5,600  | 5,000      | 3,700  | 2,300  |                                 |  |
|   | 15      | Typical Developer Charge (\$/equivalent tenement for 2015-16)                    | 8,000  | 5,900  | 5,400      | 3,600  | 2,400  |                                 |  |
| F4                                      | 16      | Residential Revenue from Usage Charges (% of residential revenue)                | 75     | 70     | 66         | 63     | 52     | F4                              | 66   |
| F5                                      | 17      | Revenue per property - Water (\$)  | 1,101  | 928    | 878        | 827    | 748    | F5                              | 881  |
| SOCIAL - Health                         |         |  |        |        |            |        |        |                                 |  |
|   | 18      | Water Supply Coverage (% of Urban Population with reticulated WS)                | 99.6   | 98     | 97         | 96     | 92     |                                 |  |
|   | 19      | Physical Water Quality Compliance (%)  | 100    | 100    | 100        | 100    | 100    |                                 |  |
|   | 19a     | Chemical Water Quality Compliance (%)  | 100    | 100    | 100        | 100    | 100    |                                 |  |
|   | 20      | Microbiological (E. coli) Water Quality Compliance (%)                           | 100    | 100    | 100        | 100    | 100.0  |                                 |  |
| H3                                      | 20a     | Percent Population with Microbiological Compliance                               | 100    | 100    | 100        | 100    | 100    | H3                              | 100  |
| SOCIAL - Levels of Service              |         |  |        |        |            |        |        |                                 |  |
| C9                                      | 25      | Water Quality Complaints (per 1000 properties)                                   | 0      | 1      | 2          | 3      | 8      | C9                              | 1.5  |
| C10                                     | 26      | Water Service Complaints (per 1000 properties)                                   | 1      | 4      | 10         | 16     | 33     | C10                             | 0.5  |
| C17                                     | 27      | Incidence of unplanned interruptions (per 1000 properties)                       | 3      | 11     | 14         | 19     | 46     | C17                             | 91   |
| C15                                     | 28      | Average Duration of Interruption (minutes)                                       | 90     | 120    | 120        | 120    | 180    | C15                             | 117  |
| A8                                      | 30      | Number of Main Breaks (per 100 km of main)                                       | 6      | 8      | 10         | 14     | 23     | A8                              | 13   |
|   | 31      | Drought Water Restrictions (% of time)   | 0      | 0      | 0          | 0      | 59     |                                 |  |
|   | 32      | Total Days Lost (%)  | 0      | 1      | 2          | 3      | 4      |                                 |  |
| ENVIRONMENTAL                           |         |  |        |        |            |        |        |                                 |  |
| W12                                     | 33      | Average Annual Residential Supplied (kL/property)                                | 152    | 185    | 205        | 275    | 452    | W12                             | 181  |
|   | 33a     | Average Annual Residential Supplied - COASTAL (kL/property)                      | 139    | 147    | 152        | 160    | 180    |                                 |  |
|   | 33b     | Average Annual Residential Supplied - INLAND (kL/property)                       | 181    | 225    | 287        | 339    | 548    |                                 |  |
|   | 33c     | Peak Day Water Supplied (kL/d/connected property)                                | 1.1    | 1.5    | 1.8        | 2.0    | 3.0    |                                 |  |
|   | 33d     | Total Urban Recycled Water Supplied (ML)   | 44     | 125    | 176        | 195    | 412    |                                 |  |
| A10                                     | 34      | Real Loss (leakage) (L/service connection/d)                                     | 50     | 70     | 70         | 90     | 110    | A10                             | 76   |
|   | 34a     | Non Revenue Water (NRW) (L/service connection/d)                                 | 70     | 99     | 106        | 124    | 187    |                                 |  |
|   | 35      | Energy Consumption (kWh/ML)  | 270    | 460    | 490        | 550    | 730    |                                 |  |
|   | 36      | Renewable Energy Consumption (% of Total Energy)                                 | 0      | 0      | 0          | 0      | 0      |                                 |  |
| E12                                     | 36a     | Net Greenhouse Gas Emissions - WS & Sge (net tonnes CO2 - equivalents/1000props) | 230    | 330    | 360        | 390    | 460    | E12                             | 393  |
| ECONOMIC - Financial                    |         |  |        |        |            |        |        |                                 |  |
|   | 42      | Current Replacement Cost per Assessment - Water (\$)                             | 21,000 | 17,200 | 16,500     | 14,800 | 11,500 |                                 |  |
| F17                                     | 43      | Economic Real Rate of Return - Water (%)   | 2.8    | 1.5    | 1.1        | 0.7    | -0.3   | F17                             | 1.9  |
|   | 44      | Return on Assets - Water (%)   | 3.1    | 1.3    | 1.0        | 0.8    | -0.2   |                                 |  |
| F9/C4                                   | 44a     | Written Down Replacement Cost - Water (\$/property)                              | 14,200 | 11,000 | 9,700      | 8,600  | 6,900  |                                 | 7,660  |
| F22                                     | 45      | Net Debt to Equity - WS & Sge(%)   | 3      | -4     | -7         | -10    | -16    | F22                             | 11   |
| F23                                     | 46      | Interest Cover - WS & Sge  | 4      | 2      | 2          | 1      | 0      | F23                             | 2  |
|   | 47      | Loan Payment - Water (\$/property)   | 135    | 48     | 16         | 0      | 0      |                                 |  |
| F30                                     | 47a     | Net Profit After Tax Ratio - WS & Sge (%)  | 24     | 15     | 11         | 5      | -2     | F30                             | 10   |
| F24                                     | 47b     | Net Profit After Tax - WS & Sge (\$'000)   | 2,640  | 980    | 680        | 290    | -50    | F24                             | 7,120  |
| ECONOMIC - Efficiency                   |         |  |        |        |            |        |        |                                 |  |
|   | 48      | Operating Cost (OMA) per 100 km of Main (\$'000)                                 | 890    | 1,110  | 1,230      | 1,390  | 1,690  |                                 |  |
| F11                                     | 49      | Operating Cost (OMA) per property (\$/property)                                  | 420    | 500    | 540        | 590    | 670    | F11                             | 455  |
|   | 50      | Operating Cost (OMA) per kL (c/kL)   | 77     | 99     | 118        | 133    | 193    |                                 |  |
|   | 51      | Management Cost (\$/property)  | 111    | 139    | 149        | 168    | 228    |                                 |  |
|   | 52      | Treatment Cost (\$/property)   | 38     | 90     | 121        | 148    | 197    |                                 |  |
|   | 53      | Pumping Cost (\$/property)   | 18     | 47     | 58         | 70     | 121    |                                 |  |
|   | 54      | Energy Cost (\$/property)  | 9      | 21     | 40         | 47     | 73     |                                 |  |
|   | 55      | Water Main Cost (\$/property)  | 49     | 75     | 82         | 88     | 124    |                                 |  |
| F28                                     | 56      | Capital Expenditure - Water Supply (\$/property)                                 | 389    | 207    | 155        | 106    | 52     | F28                             | 163  |

Notes:

1. The above NSW performance indicators are on a **percentage of LWUs** basis as this is the most appropriate basis for comparing the performance of one LWU with other LWUs. Throughout the rest of the report and in Table 1 on page 111 the performance indicators are on a **percentage of connected properties** basis as this is the most appropriate for judging **Statewide Performance** by giving due weight to larger LWUs and reducing the effect of smaller LWUs.

2. 20% is the top 20% of LWUs, **Median (50%)** is the median of LWUs and **80%** is the bottom 20% of LWUs.

3. National Medians are from the National Performance Report 2014-15 which shows the performance indicators for 76 Australian urban water utilities providing reticulated water supply services to >10,000 properties [Note 14 on page 34]. The 7 bulk supply utilities are excluded.



Sewerage Performance Percentiles (% of LWUs Basis) 2014-15

| NSW Regional Percentiles <sup>1,2</sup> |         |  |        |        |            |        |        | National Reporting <sup>3</sup> |  |
|---|---------|--|--------|--------|------------|--------|--------|---------------------------------|--|
| NWI No.                                 | NSW No. | UTILITY CHARACTERISTICS  | 20%    | 40%    | 50% Median | 60%    | 80%    | NWI No.                         | National Median Utilities with >10,000 props |
|   | 3       | Residential connected properties (% of total)  | 93     | 91     | 90         | 88     | 86     |                                 |  |
|   | 4       | New Residential Dwellings Connected to Sewerage (%)  | 1.5    | 0.9    | 0.7        | 0.5    | 0.3    |                                 |  |
| A6                                      | 5       | Properties Served per km of Main   | 40     | 35     | 34         | 33     | 28     | A6                              | 40   |
| W18                                     | 6       | Volume of Sewage Collected (ML)  | 2,800  | 800    | 600        | 400    | 200    | W18                             | 5,640  |
|   | 7       | Renewals Expenditure (% of current replacement cost of system assets)  | 1.3    | 0.7    | 0.6        | 0.4    | 0.2    |                                 |  |
|   | 8       | Employees (per 1000 properties)  | 1.2    | 1.6    | 1.8        | 1.9    | 2.5    |                                 |  |
| SOCIAL - Charges/Bills                  |         |  |        |        |            |        |        |                                 |  |
| P4.1                                    | 11a     | Residential Access Charge for 2014-15 (\$/assessment)  | 454    | 511    | 580        | 630    | 750    | P4.1                            | 620  |
|   | 11      | Residential Access Charge for 2015-16 (\$/assessment)  | 479    | 540    | 611        | 651    | 774    |                                 |  |
| P6                                      | 12a     | Typical Residential Bill for 2014-15 (\$/assessment)   | 454    | 511    | 580        | 630    | 750    | P6                              | 667  |
|   | 12      | Typical Residential Bill for 2015-16 (\$/assessment)   | 479    | 540    | 611        | 651    | 774    |                                 |  |
|   | 13a     | Typical Developer Charge for 2014-15 (\$/equivalent tenement)  | 7,000  | 4,600  | 3,900      | 3,300  | 1,400  |                                 |  |
|   | 13      | Typical Developer Charge for 2015-16 (\$/equivalent tenement)  | 7,200  | 4,500  | 4,100      | 3,600  | 1,600  |                                 |  |
|   | 14      | Non-residential sewer usage charge (c/kL)  | 222    | 180    | 150        | 125    | 103    |                                 |  |
| F6                                      | 15      | Revenue per property - Sge (\$)  | 1,002  | 820    | 717        | 659    | 553    | F6                              | 947  |
| SOCIAL - Health                         |         |  |        |        |            |        |        |                                 |  |
|   | 16      | Sewerage Coverage (% of Urban Population with Reticulated Sge Service)   | 98     | 95     | 94         | 93     | 88     |                                 |  |
| E3                                      | 17      | Percent of sewage treated to a tertiary level (%)  | 100    | 100    | 99         | 97     | 82     | E3                              | 91   |
|   | 18      | Percent of sewage volume treated that was compliant (%)  | 100    | 100    | 100        | 99     | 73     |                                 |  |
| SOCIAL - Levels of Service              |         |  |        |        |            |        |        |                                 |  |
|   | 21      | Odour Complaints (per 1000 properties)   | 0.0    | 0.0    | 0.0        | 0.3    | 1.0    |                                 |  |
| C11                                     | 22      | Sewerage Service Complaints (per 1000 properties)  | 2      | 9      | 12         | 15     | 29     | C11                             | 1.0  |
| C16                                     | 23a     | Average Sewerage Interruption (min)  | 60     | 90     | 90         | 99     | 120    | C16                             | 102  |
|   | 25      | Total Days Lost  | 0      | 0      | 2          | 2      | 4      |                                 |  |
| ENVIRONMENTAL                           |         |  |        |        |            |        |        |                                 |  |
| W19                                     | 26      | Volume of Sewage Collected per property (kL)   | 265    | 216    | 198        | 191    | 170    | W19                             | 214  |
| W26                                     | 26a     | Total recycled water supplied (ML)   | 490    | 110    | 60         | 20     | 0      | W26                             | 1,580  |
| W27                                     | 27      | Recycled Water (% of effluent recycled)  | 54     | 14     | 8          | 5      | 0      | W27                             | 15   |
| E8                                      | 28      | Biosolids Reuse (%)  | 100    | 0      | 0          | 0      | 0      | E8                              | 100  |
|   | 30      | Energy Consumption - sewerage (kWh/ML)   | 360    | 600    | 700        | 790    | 910    |                                 |  |
|   | 31      | Renewable Energy Consumption (% of total energy consumption)   | 0      | 0      | 0          | 0      | 0      |                                 |  |
| E12                                     | 32      | Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 prop                                  | 230    | 330    | 360        | 390    | 460    | E12                             | 393  |
|   | 33      | 90th Percentile Licence Limits for Effluent Discharge:<br>BOD 35 mg/L; SS 40 mg/L; Total N 25 mg/L; Total P 5 mg/L |        |        |            |        |        |                                 |  |
|   | 34      | Compliance with BOD in Licence (%)   | 100    | 100    | 100        | 100    | 100    |                                 |  |
|   | 35      | Compliance with SS in Licence (%)  | 100    | 100    | 100        | 100    | 99     |                                 |  |
| A14                                     | 36      | Sewerage Main Breaks and Chokes (per 100 km of main)   | 7      | 22     | 29         | 39     | 74     | A14                             | 17   |
|   | 37a     | Sewer Overflows (per 100 km of main)   | 0      | 2      | 3          | 6      | 18     |                                 |  |
| E13                                     | 37b     | Sewer Overflows Reported to Environmental Regulator (per 100 km of main)   | 0.0    | 0.0    | 0.0        | 0.4    | 1.5    | E13                             | 0.5  |
|   | 39      | Non-residential percentage of sewage collected (%)   | 28     | 19     | 15         | 14     | 8      |                                 |  |
| ECONOMIC - Financial                    |         |  |        |        |            |        |        |                                 |  |
|   | 43      | Revenue from Non-residential and Trade Waste Charges (% of total rates & charges)                                  | 26     | 21     | 19         | 17     | 11     |                                 |  |
|   | 44      | Revenue from Trade Waste Charges (% of total rates & charges)  | 3      | 2      | 1          | 0      | 0      |                                 |  |
|   | 45      | Current Replacement Cost of Fixed Sewerage Assets (\$/assessment)  | 19,000 | 16,100 | 15,000     | 14,100 | 12,700 |                                 |  |
| F18                                     | 46      | Economic Real Rate of Return - sewerage (%)  | 2.7    | 1.7    | 1.2        | 0.9    | 0.1    | F18                             | 3.0  |
|   | 46a     | Return on Assets - sewerage (%)  | 2.7    | 1.5    | 1.3        | 0.7    | 0.3    |                                 |  |
| F10/CE                                  | 46b     | Written Down Replacement Cost - sewerage (\$/property)   | 13,500 | 10,100 | 9,400      | 8,100  | 6,800  |                                 | 9,350  |
| F22                                     | 47      | Net Debt to Equity - WS & Sge (%)  | 3      | -4     | -7         | -10    | -16    | F22                             | 11   |
| F23                                     | 48      | Interest Cover - WS & Sge  | 4      | 2      | 2          | 1      | 0      | F23                             | 2  |
|   | 48a     | Loan Payment - sewerage (\$/property)  | 196    | 83     | 27         | 3      | 0      |                                 |  |
| F24                                     | 48b     | Net Profit After Tax - WS & Sge (\$'000)   | 2,640  | 980    | 680        | 290    | -50    | F24                             | 7,120  |
| ECONOMIC - Efficiency                   |         |  |        |        |            |        |        |                                 |  |
|   | 49      | Operating Cost - sewerage (OMA) per 100 km of Main (\$'000)  | 920    | 1,240  | 1,370      | 1,540  | 1,810  |                                 |  |
| F12                                     | 50      | Operating Cost - sewerage (OMA) per property (\$/property)   | 310    | 370    | 420        | 430    | 510    | F12                             | 400  |
|   | 51      | Operating Cost - sewerage (OMA) per kL (c/kL)  | 145    | 183    | 196        | 218    | 243    |                                 |  |
|   | 52      | Management Cost - sewerage (\$/property)   | 85     | 122    | 145        | 159    | 188    |                                 |  |
|   | 53      | Treatment Cost - sewerage (\$/property)  | 97     | 133    | 145        | 159    | 201    |                                 |  |
|   | 54      | Pumping Cost - sewerage (\$/property)  | 28     | 44     | 54         | 66     | 94     |                                 |  |
|   | 55      | Energy Cost - sewerage (\$/property)   | 19     | 32     | 36         | 38     | 51     |                                 |  |
|   | 56      | Sewer Main Cost (\$/property)  | 27     | 40     | 49         | 54     | 72     |                                 |  |
| F29                                     | 57      | Capital Expenditure - sewerage (\$/property)   | 351    | 184    | 154        | 105    | 46     | F29                             | 217  |

Notes:

1. The above NSW performance indicators are on a **percentage of LWUs** basis as this is the most appropriate basis for comparing the performance of one LWU with other LWUs. Throughout the rest of the report and in Table 2 on page 112 the performance indicators are on a **percentage of connected properties** basis as this is the most appropriate for judging **Statewide Performance** by giving due weight to larger LWUs and reducing the effect of smaller LWUs.

2. 20% is the top 20% of LWUs, **Median (50%)** is the median of LWUs and **80%** is the bottom 20% of LWUs.

3. National Medians are from the National Performance Report 2014-15 which shows the performance indicators for 75 Australian urban water utilities providing reticulated sewerage services to >10,000 properties [Note 14 on page 34].

## APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility             | Source<br>/type<br>(Bulk<br>Supp<br>lier) <sup>9</sup> | Water Treatment Works <sup>1</sup><br><br>37a | Total<br>Potable<br>Water<br>Produced<br>W11.3<br>ML<br>37c | Year built or<br>Augmented | Capacity<br><br>ML/d<br>37b | Type of<br>Treatment<br>Works <sup>2</sup><br><br>38a | Volume<br>Treated to<br>Potable<br><br>ML<br>38b | Colour Units |                  |                  |            | Turbidity Units |            |                  |            | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3,7</sup> |          |                |          |                |          |                |          |                |          |                |          | Water<br>Quality<br>Complaints<br>C9 |     | No. of Samples<br>÷ Allocation <sup>6</sup><br><br>Chemical<br>E. coli |     | Drinking Water<br>Mgmt System<br>(DWMS)?<br><br>44c | No. WTW<br>Operators<br><br>44d | Chlorination<br>System<br>Failure<br><br>45 | Major<br>Malfunction of<br>Treatment<br>Processes<br><br>46 |                               |            |
|---------------------------|--|---|---|----------------------------|-----------------------------|---|--|--------------|------------------|------------------|------------|-----------------|------------|------------------|------------|--|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|--------------------------------------|-----|--|-----|---|---------------------------------|---|---|-------------------------------|------------|
|                           |  |   |   |                            |                             |   |  | Raw<br>Water |                  | Treated<br>Water |            | Raw<br>Water    |            | Treated<br>Water |            | Colour   |          | Turbidity      |          | pH             |          | Physical       |          | Chemical       |          | E. coli        |          |                                      |     |  |     |   |                                 |   |   | E. coli<br>% Pop'n<br><br>42n |            |
|                           |  |   |   |                            |                             |   |  | Max<br>39a   | Avg<br>39b       | Max<br>39c       | Avg<br>39d | Max<br>40a      | Avg<br>40b | Max<br>40c       | Avg<br>40d | Samples<br>42a   | %<br>42b | Samples<br>42c | %<br>42d | Samples<br>42e | %<br>42f | Samples<br>42g | %<br>42h | Samples<br>42i | %<br>42j | Samples<br>42k | %<br>42l |                                      |     |  |     |   |                                 |   |   |                               | Compliance |
|                           |  |   |   |                            |                             |   |  | No.<br>43    | / 1,000<br>Props | %<br>44a         | %<br>44b   | Yes/No          | No.        | days<br>45       | days<br>46 |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
| Albury City Council       | RA   | Albury  | 7788  | 1992                       | 140                         | DF  | 7487   | 21           | 3                | 17               | 0          | 54              | 4          | 1                | 0.5        | 220  | 100      | 220            | 100      | 458            | 100      | 215            | 100      | 215            | 100      | 145            | 100      | 100                                  | 66  | 3  | 100 | 99  | Yes                             | 3   | 0   | 0                             |            |
| Armidale Dumaresq Council |  | Armidale                                      | 2856  | 2009                       | 23                          | C,OZ  | 2920   | 203          | 58               | 1                |            | 14              | 4          | 0                | 0.2        | 365  | 100      | 365            | 100      | 365            | 100      | 15             | 100      | 15             | 100      | 94             | 100      | 100                                  | 4   | 0  | 100 | 85  | Yes                             | 4   | 0   | 0                             |            |
|                           | B-RW<br>B-RW   | Wollongbar (Bulk From Rous)                   |   | -                          |                             | -   | -  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 11       | 100            | 11       | 100            | 75       | 100                                  |     | -  |     | 100   | 97                              |   |   |                               |            |
|                           |  | Ballina (Bulk From Rous)                      |   | -                          |                             | -   | -  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 11       | 100            | 11       | 100            | 167      | 100                                  |     | -  |     | 100   | 100                             |   |   |                               |            |
|                           |  | Marom Creek                                   | 98  | 1997                       | 3                           | DF  | 132  |              |                  |                  | 30         | 2               |            |                  | 1          | 0.2  | 86       | 99             | 14       | 100            | 14       | 93             | 1        | 100            | 6        | 100            | 49       | 100                                  |     |  |     | 100   | 96                              |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 98  |                            | 3                           |   | 132  |              |                  |                  | 30         | 2               |            |                  | 1          | 0.2  | 86       | 99             | 14       | 100            | 14       | 93             | 23       | 100            | 28       | 100            | 291      | 100                                  | 100 | 0  | 0   | 100   | 99                              | Yes   | 2   | 0                             | 0          |
|                           |  |   | DS<br>UF  | Euston                     | 51                          | 2006  | 0.4  | MF           | 63               | 550              | 266        | 1               |            | 98               | 31         | 1  | 0.1      | 365            | 100      | 365            | 100      | 365            | 97       | 1              | 100      | 1              | 100      | 20                                   | 100 |  |     |   | 100                             | 80  |   |                               |            |
| Balranald                 | 139  |   |   | 1988                       | 1                           | C   | 174  | 1,058        | 441              | 142              | 3          | 79              | 22         | 2                | 0.1        | 365  | 83       | 365            | 99       | 365            | 89       | 2              | 100      | 9              | 100      | 48             | 100      |                                      | 5   |  | 100 | 76  |                                 |   |   |                               |            |
| Total/Weighted Average    | 190  |   |   |                            | 2                           |   | 237  | 1,058        | 394              | 142              | 2          | 98              | 24         | 2                | 0.1        | 730  | 92       | 730            | 100      | 730            | 93       | 3              | 100      | 10             | 100      | 68             | 100      | 100                                  | 5   | 5  | 100 | 77  | Yes                             | 5   | 0   | 0                             |            |
| Balranald Council         |  |   |   |                            |                             |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
| Bathurst Regional Council |  | Bathurst                                      | 5951  | 1989                       | 60                          | C   | 6642   | 307          | 43               | 3                | 1          | 103             | 15         | 2                | 0.4        | 14   | 100      | 14             | 100      | 14             | 100      | 12             | 100      | 12             | 100      | 183            | 100      | 100                                  | 534 | 34   | 100 | 100   | Yes                             | 4   | 0   | 0                             |            |
|                           | UF<br>UF<br>UF<br>UF<br>GW<br>UF<br>GW<br>UF           | Wyndham                                       |   | -                          |                             | -   | -  |              |                  |                  | 1          | 1               |            | 0                | 0.2        | 2  | 100      | 1              | 100      | 1              | 100      | 1              | 100      | 1              | 100      | 27             | 96       |                                      | -   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Tantawangalo                                  | 94  | 2011                       | 0.5                         | CH  | 92   | 108          | 41               | 1                | 1          | 11              | 3          | 0                | 0.3        | 2  | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                                      | 12  |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Tilba (Couria Ck)                             |   | 1985                       | 1                           | CH  |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 2        | 100            | 2        | 100            | 39       | 100                                  |     |  |     | 100   | 83                              |   |   |                               |            |
|                           |  | Yellow Pinch                                  | 1145  | 1988                       | 25                          | CH  | 1123   | 14           | 10               | 3                | 2          | 13              | 1          | 47               | 5.0        | 11   | 100      | 11             | 91       | 11             | 100      | 11             | 100      | 11             | 100      | 132            | 100      |                                      | 16  |  | 100 | 94  |                                 |   |   |                               |            |
|                           |  | Bega  | 982   | 1987                       | 16                          | CH  | 963  | 10           | 5                | 1                | 1          | 2               | 1          | 1                | 0.5        | 11   | 100      | 11             | 100      | 11             | 100      | 11             | 100      | 11             | 100      | 105            | 100      |                                      | 135 |  | 100 | 93  |                                 |   |   |                               |            |
|                           |  | Brogo   | 307   | 2008                       | 6                           | CH  | 301  | 44           | 31               | 4                | 4          | 4               | 2          | 3                | 1.0        | 4  | 100      | 4              | 100      | 4              | 100      | 2              | 100      | 2              | 100      | 86             | 100      |                                      | 8   |  | 100 | 97  |                                 |   |   |                               |            |
|                           |  | Kiah  | 476   | 1972                       | 6                           | CH  | 467  |              |                  |                  | 2          | 1               |            |                  | 5          | 1.7  | 11       | 100            | 11       | 100            | 11       | 100            | 11       | 100            | 11       | 100            | 63       | 100                                  |     | 8  |     | 100   | 56                              |   |   |                               |            |
|                           |  | Bemboka                                       | 34  | 1988                       | 1                           | CH  | 33   | 191          | 52               | 12               | 8          | 61              | 9          | 8                | 4.1        | 3  | 100      | 3              | 67       | 3              | 100      | 3              | 100      | 3              | 100      | 23             | 100      |                                      | 3   |  | 100 | 92  |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 3037  |                            | 55                          |   | 2979   | 191          | 10               | 12               | 2          | 61              | 1          | 47               | 2.5        | 44   | 100      | 43             | 95       | 43             | 100      | 43             | 100      | 43             | 100      | 500            | 100      | 100                                  | 182 | 13   | 100 | 87  | Yes                             | 16  | 0   | 0                             |            |
| Bega Valley Shire Council |  |   |   |                            |                             |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
|                           | GW   | Bellingen / Seaboard                          | 974   | 1993                       | 12                          | CH  | 959  |              |                  | 1                | 1          |                 |            | 25               | 0.2        | 12   | 100      | 12             | 92       | 12             | 100      | 12             | 100      | 12             | 100      | 94             | 100      |                                      | 8   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Dorrigo                                       | 132   | 1993                       | 3                           | C   | 130  | 76           | 53               | 18               | 3          | 14              | 3          | 2                | 0.2        | 366  | 99       | 366            | 100      | 220            | 98       | 1              | 100      | 12             | 100      | 55             | 100      |                                      | 2   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 1106  |                            | 15                          |   | 1089   | 76           | 6                | 18               | 1          | 14              | 0          | 25               | 0.2        | 378  | 99       | 378            | 100      | 232            | 98       | 13             | 100      | 24             | 100      | 149            | 100      | 100                                  | 10  | 2  | 100 | 100   | Yes                             | 1   | 0   | 0                             |            |
|                           | DS   | Tocumwal                                      | 788   | 2002                       | 7                           | DAF   | 591  | 90           | 40               | 5                | 3          | 100             | 20         | 1.5              | 0.1        | 2  | 100      | 2              | 100      | 2              | 100      | 1              | 100      | 11             | 100      | 52             | 100      |                                      | 4   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Finley  | 129   | 2004                       | 2                           | C   | 97   | 100          | 50               | 5                | 3          | 200             | 50         | 10               | 0.5        | 2  | 100      | 365            | 95       | 365            | 99       | 1              | 100      | 12             | 100      | 52             | 100      |                                      | 6   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Berrigan                                      | 115   | 1990                       | 1                           | C   | 86   | 60           | 40               | 5                | 3          | 100             | 50         | 19               | 1.0        | 2  | 100      | 365            | 100      | 365            | 100      | 1              | 100      | 12             | 100      | 52             | 100      |                                      | 4   |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Barooga                                       | 219   | 2000                       | 1                           | DAF   | 164  | 100          | 50               | 5                | 1          | 80              | 20         | 2                | 0.2        | 2  | 100      | 2              | 100      | 2              | 100      | 1              | 100      | 12             | 100      | 52             | 100      |                                      | 10  |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 1251  |                            | 11                          |   | 938  | 100          | 43               | 5                | 3          | 200             | 26         | 19               | 0.2        | 8  | 100      | 734            | 98       | 734            | 100      | 4              | 100      | 47             | 100      | 208            | 100      | 100                                  | 24  | 7  | 100 | 100   | Yes                             | 4   | 0   | 0                             |            |
| Berrigan Shire Council    |  |   |   |                            |                             |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
| Bogan Shire Council       | RA   | Nyngan  | 693   | 1984                       | 9                           | C   | 681  | 450          | 196              | 5                | 0          | 296             | 93         | 1                | 0.7        | 365  | 100      | 365            | 100      | 50             | 100      | 1              | 100      | 10             | 100      | 50             | 100      | 100                                  | 0   | 0  | 100 | 98  | Yes                             | 2   | 0   | 0                             |            |
|                           | UF   | Bombala                                       | 127   | 1983                       | 3                           | C   | 232  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          | 52             | 100      | 3              | 100      | 13             | 100      | 47                                   | 100 |  | 12  |   | 100                             | 92  |   |                               |            |
|                           |  | Delegate                                      | 45  | -                          | 1                           | CH  | 83   |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 26       | 100            | 2        | 100            | 23       | 100                                  |     |  |     | 100   | 92                              |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 172   |                            | 5                           |   | 315  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 78       | 100            | 5        | 100            | 15       | 100                                  | 70  | 100  | 100 | 12  | 13                              | 100   | 92  | Yes                           | 2          |
| Boorowa Council           |  | Boorowa                                       | 214   | 1993                       | 3                           | C,CH,DF,L   | 178  | 130          | 35               | 3                | 2          | 38              | 14         | 1                | 0.2        | 2  | 100      | 2              | 100      | 48             | 100      | 2              | 100      | 2              | 100      | 48             | 100      | 100                                  | 2   | 3  | 100 | 94  | Yes                             | 1   | 0   | 0                             |            |
| Bourke Shire Council      | DS   | Bourke  | 373   | 2003                       | 3                           | C   | 200  | 400          | 80               | 3                | 2          | 1,500           | 100        | 2                | 0.5        | 12   | 100      | 12             | 100      | 12             | 100      | 2              | 100      | 11             | 100      | 47             | 100      | 100                                  | 0   | 0  | 100 | 75  | Yes                             | 1   | 0   | 0                             |            |
|                           | DS   | Brewarrina                                    | 202   | 2013                       | 1                           | C   | 163  |              |                  | 1                | 1          | 2,000           | 1,000      | 3                | 1.9        | 2  | 100      | 365            | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 61             | 100      |                                      | 4   |  | 100 | 81  |                                 |   |   |                               |            |
|                           |  | Goodooga                                      | 112   | 1996                       | 1                           | CH  | 90   |              |                  | 1                | 1          |                 |            | 1                | 0.2        | 1  | 100      | 1              | 100      | 1              | 100      | 2              | 100      | 2              | 100      | 28             | 100      |                                      |     |  | 100 | 76  |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 314   |                            | 2                           |   | 253  |              |                  | 1                | 1          | 2,000           | 644        | 3                | 1.3        | 3  | 100      | 366            | 100      | 3              | 100      | 4              | 100      | 4              | 100      | 89             | 100      | 100                                  | 4   | 9  | 100 | 79  | Yes                             | 5   | 0   | 0                             |            |
|                           | B-RW   | Rocky Ck (Bulk From Rous)                     |   | -                          |                             | -   | -  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                | 12       | 100            | 12       | 100            | 165      | 100                                  |     | 9  |     | 100   | 99                              |   |   |                               |            |
|                           |  | Mullumbimby                                   | 440   | 2011                       | 4                           | DF  | 370  | 46           | 18               | 8                | 1          | 20              | 3          | 0                | 0.0        | 45   | 100      | 348            | 100      | 52             | 100      | 3              | 100      | 3              | 100      | 51             | 100      |                                      |     |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 440   |                            | 4                           |   | 370  | 46           | 18               | 8                | 1          | 20              | 3          | 0                | 0.0        | 45   | 100      | 348            | 100      | 52             | 100      | 15             | 100      | 15             | 100      | 216            | 100      | 100                                  | 9   | 1  | 100 | 99  | Yes                             | 4   | 0   | 0                             |            |
|                           | NP   | Yeoval Nonpotable                             |   | 1964                       | 1                           |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
|                           |  | Delgany Nonpotable                            |   | 1977                       | 0.3                         |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
|                           |  | Cumnock Nonpotable                            |   | 1971                       | 1                           |   |  |              |                  |                  |            |                 |            |                  |            |  |          |                |          |                |          |                |          |                |          |                |          |                                      |     |  |     |   |                                 |   |   |                               |            |
|                           |  | Molong  |   | 2015                       | 2                           | C,CH  | 192  | 45           | 1                |                  |            | 4               | 1          | 1                | 0.3        | 52   | 100      | 52             | 100      | 53             | 98       | 2              | 100      | 2              | 100      | 85             | 100      |                                      |     |  | 100 | 100   |                                 |   |   |                               |            |
|                           |  | Total/Weighted Average                        | 208   |                            | 2                           | C,CH  | 192  | 45           | 1                |                  |            | 4               | 1          | 1                | 0.3        | 52   | 100      | 52             | 100      | 53             | 98       | 2              | 100      | 2              | 100      | 85             | 100      | 100                                  | 0   | 0  | 100 | 100   | Yes                             | 2   | 0   | 0                             |            |



APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility                 | Source /type (Bulk Supp lier) <sup>9</sup> | Water Treatment Works <sup>1</sup> | Total Potable Water Produced W11.3 ML 37c | Year built or Augmented | Capacity ML/d 37b | Type of Treatment Works <sup>2</sup> 38a | Volume Treated to Potable ML 38b | Colour Units |         |               |         | Turbidity Units |         |               |         | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |       |             |       |             |       |             |       |             |       |             |       |                                |     | Water Quality Complaints C9 |        | No. of Samples ÷ Allocation <sup>6</sup> |       | Drinking Water Mgmt System (DWMS)? | No. WTW Operators | Chlorination System Failure | Major Malfunction of Treatment Processes |
|-------------------------------|--|------------------------------------|---|-------------------------|-------------------|--|----------------------------------|--------------|---------|---------------|---------|-----------------|---------|---------------|---------|---|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|--------------------------------|-----|-----------------------------|--------|--|-------|------------------------------------|-------------------|-----------------------------|--|
|                               |  |                                    |   |                         |                   |  |                                  | Raw Water    |         | Treated Water |         | Raw Water       |         | Treated Water |         | Colour  |       | Turbidity   |       | pH          |       | Physical    |       | Chemical    |       | E. coli     |       | E. coli % Pop'n Compliance 42n |     |                             |        |  |       |                                    |                   |                             |  |
|                               |  |                                    |   |                         |                   |  |                                  | Max 39a      | Avg 39b | Max 39c       | Avg 39d | Max 40a         | Avg 40b | Max 40c       | Avg 40d | Samples 42a   | % 42b | Samples 42c | % 42d | Samples 42e | % 42f | Samples 42g | % 42h | Samples 42i | % 42j | Samples 42k | % 42l |                                |     |                             |        |  |       |                                    |                   |                             |  |
|                               |  |                                    |   |                         |                   |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                |     |                             | No. 43 | / 1,000 Props                            | % 44a | % 44b                              | Yes/No 44c        | No. 44d                     | days 45                                  |
| Carrathool Shire Council      | NP   | Rankins Springs Nonpotable         |   | 2010                    | 2                 |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                |     |                             |        |  |       |                                    |                   |                             |  |
|                               | NP   | Melbergen Nonpotable               |   | -                       | 2                 |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                |     |                             |        |  |       |                                    |                   |                             |  |
|                               | GW   | Carrathool                         | 28  | 2010                    | 1                 | CH                                       | 40                               |              |         | 1             | 1       |                 |         | 0             | 1.1     | 2   | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 11          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | GW   | Goolgowi/Merriwagga                | 125                                       | 1995                    | 2                 | CH                                       | 182                              |              |         | 1             | 1       |                 |         | 0             | 0.1     | 2   | 100   | 2           | 100   | 15          | 100   | 2           | 100   | 2           | 100   | 29          | 100   |                                | -   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | GW   | Hillston                           | 323                                       | 2010                    | 10                | CH                                       | 470                              |              |         | 1             | 1       |                 |         | 0             | 0.1     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 51          | 100   |                                | 1   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | B-Mrm                                      | Total/Weighted Average             | 476                                       |                         | 12                |  | 692                              |              |         | 1             | 1       |                 |         | 0             | 0.1     | 6   | 100   | 7           | 100   | 20          | 100   | 7           | 100   | 7           | 100   | 91          | 100   | 100                            | 1   | 1                           | 100    | 100                                      | Yes   | 5                                  | 0                 |                             | 0  |
| Central Darling Shire Council | NP   | White Cliffs                       |   | 1992                    | 0.2               |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       | 1                              |     |                             |        |  |       |                                    |                   |                             |  |
|                               |  | Ivanhoe                            | 55  | 1985                    | 1                 | C  | 70                               |              |         |               |         | 5               |         | 1             |         |   |       | 26          | 100   | 26          | 100   | 26          | 100   | 26          | 100   | 34          | 100   |                                | 12  |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Wilcannia                          | 66  | 1985                    | 1                 | C  | 85                               |              |         |               |         | 10              |         | 1.0           |         |   |       | 28          |       | 26          | 100   | 26          | 100   | 26          | 100   | 26          | 100   |                                | 24  |                             | 100    | 35                                       |       |                                    |                   |                             |  |
|                               | RA   | Total/Weighted Average             | 121                                       |                         | 1                 |  | 155                              |              |         |               |         | 10              |         | 1             |         |   |       | 54          | 48    | 52          | 100   | 52          | 100   | 52          | 100   | 60          | 100   | 100                            | 36  | 49                          | 100    | 60                                       | Yes   | 1                                  | 0                 |                             | 0  |
| Central Tablelands Water      | NP   | Quandialla                         |   | 2002                    | 1                 |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                |     |                             |        |  |       |                                    |                   |                             |  |
|                               |  | Carcoar                            | 1301                                      | 2002                    | 9                 | DAF                                      | 1255                             | 80           | 12      | 2             | 0       | 12              | 5       | 0.8           | 0.2     | 365   | 100   | 365         | 100   | 365         | 100   | 15          | 100   | 15          | 100   | 165         | 100   |                                | 7   |                             | 100    | 95                                       |       |                                    |                   |                             |  |
|                               |  | Blayney                            | 552                                       | 1966                    | 6                 | C  | 532                              | 80           | 12      | 3             | 1       | 12              | 5       | 1             | 0.3     | 365   | 100   | 365         | 100   | 365         | 100   | 12          | 100   | 2           | 100   | 68          | 100   |                                | 18  |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Total/Weighted Average             | 1853                                      |                         | 15                |  | 1787                             | 80           | 12      | 3             | 0       | 12              | 5       | 1             | 0.2     | 730   | 100   | 730         | 100   | 730         | 100   | 27          | 100   | 17          | 100   | 233         | 100   | 100                            | 25  | 5                           | 100    | 100                                      | Yes   | 2                                  | 0                 |                             | 0  |
| Clarence Valley Council       | UF   | Rushforth Road (North Coast Wa     | 5770                                      | 2012                    | 70                | CH,U                                     | 5424                             |              |         | 12            | 3       |                 |         | 6             | 1.6     | 23  | 100   | 23          | 87    | 23          | 100   | 11          | 100   | 11          | 100   | 177         | 100   |                                | 293 |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | UF   | Wooli                              | 111                                       | 2006                    | 2                 | CH,U                                     | 104                              |              |         | 2             | 2       |                 |         | 1             | 0.5     | 2   | 100   | 23          | 100   | 48          | 98    | 2           | 100   | 2           | 100   | 52          | 100   |                                | 1   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | UF   | Coutts Crossing                    | 53  | 2006                    | 1                 | CH,U                                     | 50                               |              |         | 6             | 4       |                 |         | 1             | 0.6     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 50          | 100   |                                | 3   |                             | 100    | 98                                       |       |                                    |                   |                             |  |
|                               | UF   | Glenreagh (North Coast Water)      | 67  | 2006                    | 1                 | CH,U                                     | 63                               |              |         | 2             | 2       |                 |         | 1             | 0.6     | 1   | 100   | 1           | 100   | 6           | 100   | 1           | 100   | 1           | 100   | 48          | 98    |                                | 1   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | UF   | Minnie Water                       | 41  | 2006                    | 1                 | CH,U                                     | 39                               |              |         | 5             | 5       |                 |         | 2             | 1.3     | 2   | 100   | 2           | 100   | 44          | 100   | 2           | 100   | 2           | 100   | 52          | 100   |                                | 1   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Total/Weighted Average             | 6042                                      |                         | 75                |  | 5680                             |              |         | 12            | 3       |                 |         | 6             | 1.6     | 30  | 100   | 51          | 94    | 123         | 99    | 18          | 100   | 18          | 100   | 379         | 100   | 100                            | 299 | 14                          | 100    | 100                                      | Yes   | 2                                  | 0                 |                             | 0  |
| Cobar Shire Council           | NP   | Euabalong Village (Non-Potable)    |   | 1975                    | 1                 |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                | -   |                             |        |  |       |                                    |                   |                             |  |
|                               | NP   | Euabalong West (Non-Potable)       |   | 1975                    | 1                 |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                | -   |                             |        |  |       |                                    |                   |                             |  |
|                               | NP   | Mt Hope (Non- Potable)             |   | 1975                    | 0.2               |  |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                                |     |                             |        |  |       |                                    |                   |                             |  |
|                               |  | Cobar                              | 948                                       | 1983                    | 7                 | C  | 1086                             |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 5           | 100   | 5           | 100   | 44          | 100   | 100                            | 23  | 10                          | 45     | 86                                       | Yes   | 1                                  | 0                 |                             | 0  |
| Coffs Harbour City Council    |  | Karangi                            | 5736                                      | 2009                    | 42                | DAF                                      | 5702                             | 19           | 7       | 1             | 1       | 2               | 1       | 2             | 0.2     | 14  | 100   | 14          | 100   | 14          | 100   | 14          | 100   | 14          | 100   | 514         | 100   |                                | 1   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Nana Glen                          | 20  | 1996                    | 1                 | C  | 20                               | 50           | 32      | 1             | 1       | 2               | 2       | 0             | 0.1     | 2   | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 26          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | UF   | Coramba                            | 28  | 1960                    | 1                 | CH                                       | 28                               | 53           | 32      | 6             | 2       | 2               | 1       | 1             | 0.6     | 3   | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 3           | 100   | 26          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Total/Weighted Average             | 5784                                      |                         | 43                |  | 5750                             | 53           | 7       | 6             | 1       | 2               | 1       | 2             | 0.2     | 19  | 100   | 20          | 100   | 20          | 100   | 20          | 100   | 20          | 100   | 566         | 100   | 100                            | 1   | 0                           | 100    | 100                                      | Yes   | 3                                  | 0                 |                             | 0  |
| Cooma-Monaro Council          |  | Cooma                              | 1460                                      | 1997                    | 15                | C  | 1040                             | 680          | 140     | 3             | 1       | 1,959           | 20      | 2.1           | 0.3     | 12  | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 61          | 100   |                                | 8   |                             | 100    | 97                                       |       |                                    |                   |                             |  |
|                               | UF   | Nimmitabel                         | 42  | 2004                    | 1                 | CH                                       | 30                               | 42           | 14      | 14            | 3       | 24              | 2       | 2             | 1.3     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 26          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | UF   | Bredbo                             | 31  | 2006                    | 1                 | CH,U                                     | 22                               | 1            | 1       | 1             | 1       |                 |         | 8.2           | 4.2     | 2   | 100   | 2           | 50    | 2           | 100   | 2           | 100   | 2           | 100   | 26          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Total/Weighted Average             | 1533                                      |                         | 17                |  | 1092                             | 680          | 134     | 14            | 1       | 1,959           | 19      | 8             | 0.4     | 16  | 100   | 16          | 94    | 16          | 100   | 16          | 100   | 16          | 100   | 113         | 100   | 100                            | 8   | 2                           | 100    | 100                                      | Yes   | 2                                  | 0                 |                             | 0  |
| Coonamble Shire Council       | GW   | Coonamble                          | 1011                                      | 2014                    | 6                 | LS                                       | 882                              |              |         |               |         | 5               | 2       | 0             | 0.1     |   |       | 365         | 100   | 2           | 100   | 6           | 100   | 2           | 100   | 127         | 100   |                                | 2   |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               | GW   | Gulargambone                       | 185                                       | -                       | 2                 | CH                                       | 161                              |              |         |               |         |                 |         |               |         |   |       | 38          | 73    | 68          | 65    | 2           | 100   | 2           | 100   | 57          | 100   |                                | 2   |                             | 100    | 90                                       |       |                                    |                   |                             |  |
|                               | GW   | Quambone                           | 44  | -                       | 2                 | CH                                       | 38                               |              |         |               |         | 3               | 2       | 12            | 5.6     |   |       | 26          | 46    | 26          | 44    | 2           | 100   | 2           | 100   | 26          | 100   |                                |     |                             | 100    | 100                                      |       |                                    |                   |                             |  |
|                               |  | Total/Weighted Average             | 1239                                      |                         | 9                 |  | 1081                             |              |         |               |         | 5               | 2       | 12            | 0.2     |   |       | 429         | 94    | 96          | 60    | 10          | 100   | 6           | 100   | 210         | 100</ |                                |     |                             |        |  |       |                                    |                   |                             |  |



APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility                     | Source /type (Bulk Supp lier) <sup>9</sup> | Water Treatment Works <sup>1</sup> | Total Potable Water Produced W11.3 ML 37c | Year built or Augmented | Capacity ML/d 37b | Type of Treatment Works <sup>2</sup> | Volume Treated to Potable ML 38b | Colour Units |               |               |         | Turbidity Units |         |               |         | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |       |             |       |             |       |             |       |             |       |             |       |                            |     | Water Quality Complaints C9 |     | No. of Samples ÷ Allocation <sup>6</sup> |     | Drinking Water Mgmt System (DWMS)? | No. WTW Operators | Chlorination System Failure | Major Malfunction of Treatment Processes |
|-----------------------------------|--|------------------------------------|---|-------------------------|-------------------|--------------------------------------|----------------------------------|--------------|---------------|---------------|---------|-----------------|---------|---------------|---------|---|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|----------------------------|-----|-----------------------------|-----|--|-----|------------------------------------|-------------------|-----------------------------|--|
|                                   |  |                                    |   |                         |                   |                                      |                                  | Raw Water    |               | Treated Water |         | Raw Water       |         | Treated Water |         | Colour  |       | Turbidity   |       | pH          |       | Physical    |       | Chemical    |       | E. coli     |       | E. coli % Pop'n Compliance |     |                             |     |  |     |                                    |                   |                             |  |
|                                   |  |                                    |   |                         |                   |                                      |                                  | Max 39a      | Avg 39b       | Max 39c       | Avg 39d | Max 40a         | Avg 40b | Max 40c       | Avg 40d | Samples 42a   | % 42b | Samples 42c | % 42d | Samples 42e | % 42f | Samples 42g | % 42h | Samples 42i | % 42j | Samples 42k | % 42l |                            | 42n |                             |     |  |     |                                    |                   |                             |  |
|                                   |  |                                    |   |                         |                   |                                      |                                  | No. 43       | / 1,000 Props | % 44a         | % 44b   | Yes/No 44c      | No. 44d | days 45       | days 46 |   |       |             |       |             |       |             |       |             |       |             |       |                            |     |                             |     |  |     |                                    |                   |                             |  |
| Dubbo City Council                | RA, GW                                     | John Gilbert                       | 8379                                      | 2007                    | 80                | C                                    | 7875                             | 230          | 24            | 11            | 0       | 49              | 10      | 1             | 0.2     | 246   | 100   | 359         | 100   | 119         | 98    | 12          | 100   | 12          | 100   | 166         | 100   | 100                        | 12  | 1                           | 100 | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
| Eurobodalla Shire Council         |  | Eurobodalla Southern               | 161                                       | 2012                    | 6                 | DF                                   | 161                              | 29           | 1             | 9             | 0       | 8               | 3       | 9.2           | 0.6     | 70  | 100   | 77          | 100   | 12          | 83    | 12          | 100   | 12          | 100   | 121         | 100   |                            | 1   |                             | 100 | 97                                       |     |                                    |                   |                             |  |
|                                   |  | Eurobodalla Northern               | 3132                                      | 2010                    | 20                | C,DAF,UV                             | 3132                             | 18           | 12            | 3             | 1       | 1               | 1       | 0.6           | 0.1     | 365   | 100   | 365         | 100   | 12          | 92    | 24          | 100   | 24          | 100   | 382         | 100   |                            | 13  |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 3293                                      |                         | 26                |                                      | 3293                             | 29           | 11            | 9             | 1       | 8               | 1       | 9.2           | 0.1     | 435   | 100   | 442         | 100   | 24          | 88    | 36          | 100   | 36          | 100   | 503         | 100   | 100                        | 14  | 1                           | 100 | 100                                      | Yes | 5                                  | 0                 | 0                           |  |
|                                   |  | Fish River Water Supply            | Duckmaloi                                 | 2426                    | 2003              | 11                                   | MF                               | 871          |               |               |         |                 |         |               |         |   |       |             |       |             |       |             | 16    | 100         | 16    | 100         | 162   | 100                        | 100 | -                           | -   | 100                                      | 100 | Yes                                | 1                 | 0                           | 0  |
| Forbes Shire Council              |  | Forbes                             | 2415                                      | 1966                    | 26                | C                                    | 2466                             | 220          | 89            | 5             | 3       | 440             | 41      | 1             | 0.3     | 354   | 100   | 66          | 100   | 14          | 100   | 13          | 100   | 13          | 100   | 66          | 100   | 100                        | 8   | 2                           | 100 | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
| Gilgandra Shire Council           | GW   | Gilgandra                          | 925                                       | 1973                    | 5                 | C                                    | 837                              |              |               |               |         | 10              | 1       | 3             | 0.5     |   |       | 2           | 100   | 52          | 100   | 52          | 100   | 12          | 100   | 49          | 100   | 100                        | 6   | 4                           | 100 | 96                                       | Yes | 4                                  | 0                 | 0                           |  |
| Glen Innes Severn Shire Council   |  | Martins Lookout                    | 489                                       | 1982                    | 12                | C                                    | 501                              | 1,116        | 83            | 27            |         | 2               | 134     | 8             | 1       | 0.3   | 365   | 99          | 365   | 99          | 12    | 100         | 12    | 100         | 12    | 100         | 51    | 100                        |     |                             |     | 100                                      | 100 |                                    |                   |                             |  |
|                                   |  | Deepwater                          | 21  | 2011                    | 7                 | DAF                                  | 22                               | 432          | 145           | 20            | 4       | 32              | 6       | 1             | 0.2     | 198   | 98    | 223         | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 27          | 100   |                            |     |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 510                                       |                         | 19                |                                      | 523                              | 1,116        | 85            | 27            | 2       | 134             | 8       | 1             | 0.3     | 563   | 99    | 588         | 99    | 14          | 100   | 14          | 100   | 14          | 100   | 78          | 100   | 100                        | 0   | 0                           | 100 | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
|                                   |  | Goldenfields Water Reticulator     | GW  | Oura                    | 290               | 1975                                 | 26                               | CH           | 3940          |               |         | 5               |         | 0             | 0       | 2   | 0.2   | 44          | 100   | 44          | 100   | 44          | 84    | 44          | 100   | 44          | 100   | 268                        | 100 | 100                         | 27  | 3  | 100 | 100                                | Yes               | 3                           | 0  |
| Goldenfields Water County Council |  | Jugiong                            | 7714                                      | 1991                    | 40                | C                                    | 4140                             | 25           | 22            | 5             | 2       | 7               | 4       | 4             | 0.6     | 14  | 100   | 14          | 100   | 14          | 100   | 23          | 100   | 33          | 100   | 188         | 100   |                            | 2   |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Mount Arthur                       | 922                                       | -                       | 4                 | CH                                   | 495                              | 1            |               |               |         |                 |         |               | 0       | 0.2   | 8     | 100         | 8     | 100         | 8     | 100         | 8     | 100         | 8     | 100         | 64    | 100                        |     | 20                          |     | 100                                      | 100 |                                    |                   |                             |  |
|                                   |  | Mount Daylight                     | 514                                       | -                       | 1                 | CH                                   | 276                              |              |               |               |         |                 |         |               |         |   | 2     | 100         | 2     | 100         | 2     | 100         | 2     | 100         | 2     | 100         | 26    | 100                        |     |                             |     | 100                                      | 100 |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 9151                                      |                         | 46                |                                      | 4911                             | 25           | 19            | 5             | 1       | 7               | 3       | 4             | 0.5     | 24  | 100   | 24          | 100   | 24          | 100   | 33          | 100   | 43          | 100   | 278         | 100   | 100                        | 22  | 1                           | 100 | 100                                      | Yes |                                    | 0                 | 0                           |  |
| Gosford City Council              |  | Somersby                           | 13103                                     | 1986                    | 140               | C                                    | 13080                            | 605          | 124           | 8             | 1       | 60              | 8       | 0             | 0.2     | 12  | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 382         | 100   |                            | 852 |                             | 100 | 98                                       |     |                                    |                   |                             |  |
|                                   |  | Woy Woy                            |   | 2007                    | 5                 | MF                                   |                                  |              |               |               |         |                 |         |               |         |   |       |             |       |             |       |             | 100   | 12          | 100   |             |       |                            |     |                             |     |  |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 13103                                     |                         | 145               |                                      | 13080                            | 605          | 124           | 8             | 1       | 60              | 8       | 0             | 0.2     | 12  | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 24          | 100   | 382         | 100   | 100                        | 852 | 12                          | 100 | 98                                       | Yes | 4                                  | 0                 | 0                           |  |
| Goulburn Mulwaree Council         |  | Goulburn                           | 2463                                      | 2006                    | 35                | C                                    | 2519                             | 854          | 143           | 4             | 2       | 58              | 5       | 4             | 1.0     | 26  | 100   | 26          | 100   | 24          | 100   | 26          | 100   | 10          | 100   | 107         | 100   |                            | 49  |                             | 91  | 96                                       |     |                                    |                   |                             |  |
|                                   |  | Marulan                            | 83  | 1997                    | 2                 | MF                                   | 85                               | 112          | 34            | 9             | 5       | 22              | 1       | 5.4           | 1.0     | 25  | 100   | 25          | 96    | 24          | 100   | 25          | 96    | 1           | 100   | 56          | 100   |                            | 1   |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 2546                                      |                         | 37                |                                      | 2604                             | 854          | 140           | 9             | 2       | 58              | 5       | 5             | 1.0     | 51  | 100   | 51          | 98    | 48          | 100   | 51          | 98    | 11          | 100   | 163         | 100   | 100                        | 50  | 4                           | 92  | 100                                      | Yes | 4                                  | 0                 | 0                           |  |
| Greater Hume Shire Council        | UF   | Villages                           | 144                                       | 2005                    | 5                 | DF                                   | 379                              |              |               |               |         |                 |         | 1             | 0.4     |   |       | 2           | 100   | 2           | 100   | 52          | 100   | 2           | 100   | 50          | 100   |                            |     |                             | 100 | 98                                       |     |                                    |                   |                             |  |
|                                   |  | Culcairn                           | 64  | 2007                    | 3                 | CH,U                                 | 169                              | 1            | 1             | 1             | 1       | 2               | 2       | 2             | 1.0     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 50          | 100   |                            |     |                             | 100 | 98                                       |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 208                                       |                         | 7                 |                                      | 548                              | 1            | 0             | 1             | 0       | 2               | 0       | 2             | 0.6     | 2   | 100   | 4           | 100   | 4           | 100   | 54          | 100   | 4           | 100   | 100         | 100   | 100                        | 0   | 0                           | 100 | 98                                       | Yes | 2                                  | 0                 | 0                           |  |
| Griffith City Council             | B-Mrm                                      | Griffith                           | 6460                                      | 1987                    | 60                | DAF                                  | 6473                             | 66           | 29            | 4             | 2       | 25              | 11      | 2             | 0.2     | 329   | 100   | 334         | 100   | 13          | 100   | 13          | 100   | 13          | 100   | 176         | 100   |                            | 14  |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Yenda                              | 35  | 2001                    | 2                 | MF                                   | 35                               |              |               |               |         | 39              | 21      | 1             | 0.1     |   |       | 93          | 100   | 1           | 100   | 1           | 100   | 11          | 100   | 60          | 100   |                            |     |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 6495                                      |                         | 62                |                                      | 6508                             | 66           | 29            | 4             | 2       | 39              | 11      | 2             | 0.2     | 329   | 100   | 427         | 100   | 14          | 100   | 14          | 100   | 24          | 100   | 236         | 100   | 100                        | 14  | 2                           | 100 | 100                                      | Yes | 2                                  | 1                 | 0                           |  |
| Gundagai Shire Council            |  | Gundagai                           | 600                                       | 1988                    | 5                 | C                                    | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 2           | 100   | 12          | 100   | 50          | 100   | 100                        | -   | -                           | 100 | 98                                       | Yes | 2                                  | 0                 | 0                           |  |
| Gunnedah Shire Council            | GW   | Gunnedah                           | 2943                                      | 2009                    | 20                | CH                                   | 2419                             |              |               | 5             | 0       |                 |         | 0             | 0.1     | 12  | 100   | 12          | 100   |             |       | 22          | 97    | 12          | 100   | 65          | 100   |                            | 1   |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Curlewis                           | 120                                       | 2004                    | 1                 | CH                                   | 99                               |              |               | 1             | 1       |                 |         | 0             | 0.1     | 2   | 100   | 2           | 100   |             |       | 2           | 100   | 2           | 100   | 52          | 100   |                            | 1   |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Tambar Springs                     | 22  | 2006                    |                   | CH                                   | 18                               |              |               | 1             | 1       |                 |         | 0.3           | 0.2     | 2   | 100   | 2           | 100   | 5           | 100   | 2           | 100   | 2           | 100   | 12          | 100   |                            | 1   |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Mullaley                           | 19  | 2006                    | 1                 | CH                                   | 16                               |              |               |               |         |                 |         |               |         |   |       |             |       | 3           | 100   | 3           | 100   | 3           | 89    | 13          | 92    |                            |     |                             | 100 | 100                                      |     |                                    |                   |                             |  |
|                                   |  | Total/Weighted Average             | 3104                                      |                         | 22                |                                      | 2552                             |              |               | 5             | 0       |                 |         | 0.3           | 0.1     | 16  | 100   | 16          | 100   | 8           | 100   | 29          | 98    | 19          | 98    | 142         | 99    | 99                         | 3   | 1                           | 100 | 100                                      | Yes | 2                                  | 0                 | 0                           |  |
| Guyra Shire Council               |  | Guyra                              | 395                                       | 2003                    | 6                 | C                                    | 379                              | 78           | 33            | 15            | 4       | 21              | 4       | 1             | 0.5     | 1   | 100   | 48          | 100   | 47          | 100   | 1           | 100   | 13          | 100   | 50          | 100   | 100                        | 7   | 6                           | 100 | 98                                       | Yes | 4                                  | 0                 | 0                           |  |
| Gwydir Shire Council              | NP   | Gravesend Non Potable              |   | 2003                    | 1                 |                                      |                                  |              |               |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                            | 2   |                             |     |  |     |                                    |                   |                             |  |
|                                   |  | Bingara                            | 441                                       | 2011                    | 3                 | DAF                                  | 388                              |              |               | 3             | 2       |                 |         | 3             | 0.6     | 11  | 100   | 11          | 100   | 11          | 100   | 12          | 100   | 12          | 100   | 53          | 100   |                            | 6   |                             | 100 | 100                                      |     |                                    |                   |                             |  |

APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility                  | Source /type (Bulk Supp lier) <sup>9</sup> | Water Treatment Works <sup>1</sup> | Total Potable Water Produced W11.3 ML 37c | Year built or Augmented | Capacity ML/d 37b | Type of Treatment Works <sup>2</sup> 38a | Volume Treated to Potable ML 38b | Colour Units |               |               |         | Turbidity Units |         |               |         | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |       |             |       |             |       |             |       |             |       |             |       |                 |                |    |     | Water Quality Complaints C9 |     | No. of Samples ÷ Allocation <sup>6</sup> |   | Drinking Water Mgmt System (DWMS)? | No. WTW Operators | Chlorination System Failure | Major Malfunction of Treatment Processes |
|--------------------------------|--|------------------------------------|---|-------------------------|-------------------|--|----------------------------------|--------------|---------------|---------------|---------|-----------------|---------|---------------|---------|---|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-----------------|----------------|----|-----|-----------------------------|-----|--|---|------------------------------------|-------------------|-----------------------------|--|
|                                |  |                                    |   |                         |                   |  |                                  | Raw Water    |               | Treated Water |         | Raw Water       |         | Treated Water |         | Colour  |       | Turbidity   |       | pH          |       | Physical    |       | Chemical    |       | E. coli     |       | E. coli % Pop'n |                |    |     |                             |     |  |   |                                    |                   |                             |  |
|                                |  |                                    |   |                         |                   |  |                                  | Max 39a      | Avg 39b       | Max 39c       | Avg 39d | Max 40a         | Avg 40b | Max 40c       | Avg 40d | Samples 42a   | % 42b | Samples 42c | % 42d | Samples 42e | % 42f | Samples 42g | % 42h | Samples 42i | % 42j | Samples 42k | % 42l |                 | Compliance 42n |    |     |                             |     |  |   |                                    |                   |                             |  |
|                                |  |                                    |   |                         |                   |  |                                  | No. 43       | / 1,000 Props | % 44a         | % 44b   | Yes/No 44c      | No. 44d | days 45       | days 46 |   |       |             |       |             |       |             |       |             |       |             |       |                 |                |    |     |                             |     |  |   |                                    |                   |                             |  |
| Inverell Shire Council         | GW RA                                      | Copeton                            | 1710                                      | 1982                    | 18                | C  | 2500                             | 200          | 120           | 3             | 2       | 6               | 2       | 1             | 0.2     | 360   | 100   | 360         | 100   | 360         | 100   | 13          | 100   | 13          | 100   | 90          | 100   |                 | 2              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Ashford                            | 82  | 1984                    | 1                 | C  | 120                              | 250          | 150           |               |         | 75              | 15      | 2             | 0.2     | 360   | 100   | 360         | 100   | 360         | 100   | 2           | 100   | 14          | 100   | 26          | 100   |                 |                |    | 100 | 68                          |     |  |   |                                    |                   |                             |  |
|                                |  | Yetman                             | 16  | 1980                    | 1                 | CH                                       | 24                               |              |               |               |         |                 |         | 0             | 0.2     |   |       | 1           | 100   |             |       | 2           | 100   | 2           | 100   | 27          | 100   |                 |                |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 1809                                      |                         | 20                |  | 2644                             | 250          | 120           | 3             | 2       | 75              | 3       | 2             | 0.2     | 720   | 100   | 721         | 100   | 720         | 100   | 17          | 100   | 29          | 100   | 143         | 100   | 100             | 2              | 0  | 100 | 95                          | Yes | 2  | 0 |                                    |                   | 0                           |  |
| Jerilderie Shire Council       | DS   | Jerilderie                         | 118                                       | 1980                    | 1                 | CH                                       | 105                              | 250          | 228           |               |         | 321             | 75      | 1             | 0.6     | 365   | 100   | 365         | 100   | 365         | 100   | 2           | 100   | 2           | 100   | 52          | 100   | 100             | 4              | 8  | 100 | 100                         | Yes | 2  | 0 |                                    |                   | 0                           |  |
| Kempsey Shire Council          | GW   | Sherwood                           | 2663                                      | 2000                    | 38                | CH,U                                     | 2511                             |              |               | 1             | 1       |                 |         | 9             | 1.5     | 12  | 100   | 270         | 99    | 284         | 99    | 24          | 100   | 12          | 100   | 271         | 100   |                 | 1              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                | GW   | South West Rocks                   | 643                                       | 2006                    | 6                 | MF                                       | 606                              |              |               | 1             | 0       |                 |         | 1             | 0.3     | 4   | 100   | 55          | 99    | 72          | 99    | 8           | 100   | 12          | 100   | 67          | 100   |                 | 1              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                | GW   | Stuarts Point                      | 239                                       | 2010                    | 3                 | DF                                       | 225                              |              |               | 1             | 0       |                 |         | 2             | 0.4     | 10  | 100   | 52          | 100   | 63          | 98    | 20          | 100   | 10          | 100   | 53          | 100   |                 |                |    | 91  | 100                         |     |  |   |                                    |                   |                             |  |
|                                | GW   | Crescent Head                      | 137                                       | 2012                    | 3                 | CH,U                                     | 129                              |              |               | 14            | 14      |                 |         | 7.0           | 2.6     | 2   | 100   | 64          | 97    | 70          | 94    | 4           | 100   | 2           | 100   | 67          | 100   |                 | 1              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                | GW   | Hat Head                           | 47  | 2000                    | 1                 | CH,DF                                    | 44                               |              |               | 3             | 3       |                 |         | 2             | 0.7     | 2   | 100   | 22          | 100   | 26          | 100   | 4           | 100   | 2           | 100   | 24          | 100   |                 |                |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                | GW   | Willawarrin                        | 7   | 1972                    | 0.2               | CH                                       | 7                                |              |               | 2             | 1       |                 |         | 2             | 0.6     | 8   | 100   | 8           | 100   | 36          | 92    | 16          | 100   | 8           | 100   | 27          | 100   |                 |                |    | 73  | 100                         |     |  |   |                                    |                   |                             |  |
|                                | GW   | Bellbrook                          | 7   | 2010                    | 0.9               | DF                                       | 7                                |              |               | 1             | 0       |                 |         | 2             | 0.3     | 12  | 100   | 40          | 100   | 40          | 100   | 24          | 100   | 12          | 100   | 27          | 100   |                 |                |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 3743                                      |                         | 52                |  | 3529                             |              |               | 14            | 1       |                 |         | 9             | 1.3     | 50  | 100   | 511         | 99    | 591         | 98    | 100         | 100   | 58          | 100   | 536         | 100   | 100             | 3              | 0  | 100 | 100                         | Yes | 7  | 0 |                                    |                   | 0                           |  |
|                                | Kyogle Council                             | NP NP                              | Bonalbo                                   |                         | 2010              | 0.3                                      |                                  |              |               |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                 |                |    |     |                             |     |  |   |                                    |                   |                             |  |
|                                |  | Woodenbong                         |   | -                       |                   |  |                                  |              |               |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       | -               |                |    |     |                             |     |  |   |                                    |                   |                             |  |
|                                |  | Kyogle                             |   | 1988                    | 3                 | C  | 287                              | 550          | 189           | 136           | 44      | 244             | 10      | 18            | 0.6     | 365   | 100   | 102         | 99    | 52          | 100   | 2           | 100   | 12          | 100   | 100         | 100   |                 | 4              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 355                                       |                         | 3                 | C  | 287                              | 550          | 189           | 136           | 44      | 244             | 10      | 18            | 0.6     | 365   | 100   | 102         | 99    | 52          | 100   | 2           | 100   | 12          | 100   | 100         | 100   | 100             | 4              | 2  | 100 | 100                         | Yes | 7  | 0 |                                    |                   | 0                           |  |
| Lachlan Shire Council          |  | Condobolin                         |   | 2000                    | 71                | C  | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 2           | 100   | 11          | 100   | 83          | 100   |                 | -              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Lake Cargelligo                    |   | 2004                    | 5                 | DAF,MF                                   | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 3           | 100   | 3           | 100   | 53          | 100   |                 | -              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Tottenham                          |   | 1994                    | 1                 | C,LS                                     | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 1           | 100   | 1           | 100   | 35          | 100   |                 | -              |    | 100 | 95                          |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 2006                                      |                         | 76                |  |                                  |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 6           | 100   | 15          | 100   | 171         | 100   | 100             | -              | -  | 100 | 100                         | Yes | 4  | 0 |                                    |                   | 0                           |  |
| Leeton Shire Council           |  | Leeton                             | 2591                                      | 1993                    | 25                | C  | 2300                             | 139          | 44            | 1             | 0       | 89              | 23      | 1             | 0.0     | 365   | 100   | 365         | 100   | 365         | 100   | 12          | 100   | 12          | 100   | 66          | 100   |                 |                |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Whitton                            | 89  | 2003                    | 0.9               | C  | 79                               | 215          | 84            | 0             | 0       | 175             | 49      | 1             | 0.1     | 365   | 100   | 365         | 100   | 365         | 100   | 2           | 100   | 2           | 100   | 24          | 100   |                 |                |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                |  | Murrami                            | 20  | 1993                    | 0.3               | LS                                       | 18                               | 100          | 50            | 1             | 0       | 82              | 32      | 6             | 0.8     | 365   | 100   | 365         | 100   | 365         | 100   | 2           | 100   | 2           | 100   | 25          | 100   |                 |                |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 2700                                      |                         | 26                |  | 2397                             | 215          | 45            | 1             | 0       | 175             | 24      | 6             | 0.0     | 1,095   | 100   | 1,095       | 100   | 1,095       | 100   | 16          | 100   | 16          | 100   | 115         | 100   | 100             | 0              | 0  | 100 | 100                         | Yes | 4  | 0 |                                    |                   | 0                           |  |
| Lismore City Council           | B-RW UF                                    | Rocky Ck (Bulk From Rous)          |   | -                       |                   | -  | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 12          | 100   | 12          | 100   | 188         | 100   |                 | -              |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                |  | Nimbin                             |   | 1949                    | 0.3               | CH                                       | 195                              | 43           | 27            | 16            | 9       | 17              | 4       | 2             | 1.4     | 13  | 92    | 51          | 90    | 52          | 100   | 2           | 100   | 2           | 100   | 24          | 100   |                 |                |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             |   |                         | 0.3               |  | 195                              | 43           | 27            | 16            | 9       | 17              | 4       | 2             | 1.4     | 13  | 92    | 51          | 90    | 52          | 100   | 14          | 100   | 14          | 100   | 212         | 100   | 100             | 0              | 0  | 100 | 96                          | Yes | 3  | 0 |                                    |                   | 0                           |  |
| Lithgow City Council           | B-FR                                       | Oakey Park                         | 828                                       | 1985                    | 15                | C  | 1298                             |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 12          | 100   | 12          | 100   | 80          | 100   | 100             | 280            | 35 | 100 | 100                         | Yes | 1  | 0 |                                    |                   | 0                           |  |
| Liverpool Plains Shire Council | GW GW                                      | Werris Creek                       | 291                                       | 2004                    | 3                 | C  | 261                              | 200          | 60            | 5             | 1       | 10              | 4       | 1             | 0.4     | 365   | 98    | 365         | 99    | 365         | 100   | 2           | 100   | 2           | 100   | 49          | 100   |                 | 5              |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                |  | Quirindi                           | 620                                       | 2010                    | 6                 | CH                                       | 557                              | 2            | 1             | 1             | 1       | 0               | 0       | 0             | 0.2     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 49          | 100   |                 |                |    | 100 | 96                          |     |  |   |                                    |                   |                             |  |
|                                |  | Willow Tree                        |   | -                       |                   | -  | -                                |              |               |               |         |                 |         |               |         |   |       |             |       |             |       | 2           | 100   | 2           | 100   | 26          | 100   |                 | -              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Total/Weighted Average             | 911                                       |                         | 9                 |  | 818                              | 200          | 20            | 5             | 1       | 10              | 1       | 1             | 0.3     | 367   | 98    | 367         | 99    | 367         | 100   | 6           | 100   | 6           | 100   | 124         | 100   | 100             | 5              | 2  | 100 | 98                          | Yes | 4  | 0 |                                    |                   | 0                           |  |
| MidCoast County Council        | GW   | Gloucester                         | 329                                       | 1981                    | 5                 | C  | 329                              | 27           | 16            | 4             | 0       | 29              | 4       | 4             | 0.4     | 74  | 100   | 74          | 100   | 74          | 76    | 224         | 92    | 193         | 99    | 79          | 100   |                 | 10             |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Bootawa Dam                        | 7659                                      | 2010                    | 60                | MF,OZ                                    | 7658                             | 55           | 12            | 3             | 0       | 21              | 3       | 0             | 0.1     | 486   | 100   | 486         | 100   | 486         | 97    | 1,467       | 99    | 1,744       | 100   | 452         | 100   |                 | 101            |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Tea Gardens                        | 526                                       | 2013                    | 8                 | MF                                       | 526                              | 16           | 11            | 3             | 1       | 0               | 0       | 3             | 0.5     | 55  | 100   | 55          | 100   | 55          | 100   | 172         | 100   | 192         | 99    | 53          | 100   |                 | 6              |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Bulahdelah                         | 118                                       | 2009                    | 2                 | C  | 118                              | 130          | 76            | 3             | 0       | 31              | 9       | 1             | 0.2     | 55  | 100   | 55          | 100   | 55          | 100   | 167         | 100   | 200         | 100   | 53          | 100   |                 |                |    | 100 | 100                         |     |  |   |                                    |                   |                             |  |
|                                |  | Stroud                             | 112                                       | 1997                    | 2                 | C  | 112</                            |              |               |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                 |                |    |     |                             |     |  |   |                                    |                   |                             |  |



APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility              | Source /type (Bulk Supp lier) <sup>9</sup> | Water Treatment Works <sup>1</sup> | Total Potable Water Produced W11.3 ML 37c | Year built or Augmented | Capacity ML/d 37b | Type of Treatment Works <sup>2</sup> | Volume Treated to Potable ML 38b | Colour Units |         |               |         | Turbidity Units |         |               |         | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |       |             |       |             |       |             |       |             |       |             |       |                 |                | Water Quality Complaints C9 |        | No. of Samples ÷ Allocation <sup>6</sup> |     | Drinking Water Mgmt System (DWMS)? | No. WTW Operators | Chlorination System Failure | Major Malfunction of Treatment Processes |
|----------------------------|--|------------------------------------|---|-------------------------|-------------------|--------------------------------------|----------------------------------|--------------|---------|---------------|---------|-----------------|---------|---------------|---------|---|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-----------------|----------------|-----------------------------|--------|--|-----|------------------------------------|-------------------|-----------------------------|--|
|                            |  |                                    |   |                         |                   |                                      |                                  | Raw Water    |         | Treated Water |         | Raw Water       |         | Treated Water |         | Colour  |       | Turbidity   |       | pH          |       | Physical    |       | Chemical    |       | E. coli     |       | E. coli % Pop'n |                |                             |        |  |     |                                    |                   |                             |  |
|                            |  |                                    |   |                         |                   |                                      |                                  | Max 39a      | Avg 39b | Max 39c       | Avg 39d | Max 40a         | Avg 40b | Max 40c       | Avg 40d | Samples 42a   | % 42b | Samples 42c | % 42d | Samples 42e | % 42f | Samples 42g | % 42h | Samples 42i | % 42j | Samples 42k | % 42l |                 | Compliance 42n |                             |        |  |     |                                    |                   |                             |  |
|                            |  |                                    |   |                         |                   |                                      |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       |             |       |             |       |             |       |                 |                |                             | No. 43 |  |     |                                    |                   | / 1,000 Props               | % 44a                                    |
| Moree Plains Shire Council | UF   | Mash                               | 271                                       | 1988                    | 5                 | CH                                   | 257                              |              |         |               |         |                 |         |               |         |   |       |             |       | 2           | 100   | 4           | 100   | 2           | 100   | 52          | 100   |                 |                |                             |        |  |     |                                    |                   |                             |  |
|                            | UF   | Industrial Drive                   | 498                                       | 1988                    | 1                 | CH                                   | 472                              |              |         |               |         |                 |         |               |         |   |       |             |       | 2           | 100   | 4           | 100   | 2           | 100   | 52          | 100   |                 | -              |                             |        |  |     |                                    |                   |                             |  |
|                            | GW   | Broadwater Creek                   | 1803                                      | 1986                    | 18                | CH                                   | 1709                             |              |         |               |         |                 |         |               |         |   |       |             |       | 4           | 100   | 12          | 100   | 12          | 100   | 99          | 100   |                 |                |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | DS   | Boggabilla                         | 102                                       | 1986                    | 0.4               | C                                    | 97                               |              |         |               |         |                 |         |               |         |   |       |             |       | 52          | 100   | 4           | 100   | 10          | 100   | 52          | 100   |                 | 10             |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Mungindi                           | 234                                       | 1974                    | 1                 | C                                    | 222                              |              |         |               |         |                 |         |               |         |   |       |             |       | 4           | 100   | 4           | 100   | 12          | 100   | 52          | 100   |                 | 3              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Pallamallawa                       | 79  | 1986                    | 1                 | CH                                   | 75                               |              |         |               |         |                 |         |               |         |   |       |             |       | 2           | 100   | 2           | 100   | 11          | 100   | 27          | 100   |                 | -              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 2987                                      |                         | 27                |                                      | 2832                             |              |         |               |         |                 |         |               |         |   |       |             |       | 66          | 100   | 30          | 100   | 49          | 100   | 334         | 100   | 100             | 13             | 3                           |        |  | Yes | 3                                  | 0                 | 0                           |  |
| Murray Shire Council       | DS   | Moama                              | 622                                       | 1991                    | 6                 | DAF                                  | 705                              | 150          | 74      | 5             | 5       | 77              | 27      | 2             | 0.7     | 2   | 100   | 2           | 100   | 2           | 100   | 8           | 100   | 12          | 100   | 48          | 100   |                 |                |                             | 100    | 94                                       |     |                                    |                   |                             |  |
|                            |  | Mathoura                           | 147                                       | 1989                    | 2                 | C                                    | 167                              | 300          | 147     | 5             | 5       | 49              | 28      | 2             | 0.2     | 2   | 100   | 2           | 100   | 2           | 100   | 4           | 100   | 13          | 100   | 48          | 100   |                 |                |                             | 100    | 94                                       |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 770                                       |                         | 8                 |                                      | 872                              | 300          | 88      | 5             | 5       | 77              | 27      | 2             | 0.6     | 4   | 100   | 4           | 100   | 4           | 100   | 12          | 100   | 25          | 100   | 96          | 100   | 100             | 0              | 0                           | 100    | 94                                       | Yes | 2                                  | 0                 | 0                           |  |
| Murrumbidgee Shire Council | GW   | Coleambally                        |   | 2010                    | 5                 | CH                                   | -                                |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 2           | 100   | 2           | 100   | 49          | 100   |                 | -              |                             | 100    | 96                                       |     |                                    |                   |                             |  |
|                            | GW   | Darlington Point                   |   | -                       | 5                 | CH                                   | -                                |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 2           | 100   | 2           | 100   | 52          | 100   |                 | -              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 794                                       |                         | 10                |                                      |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 4           | 100   | 4           | 100   | 101         | 100   | 100             | -              | -                           | 100    | 99                                       | Yes | 3                                  | 0                 | 0                           |  |
| Muswellbrook Shire Council | UF   | Muswellbrook                       | 1803                                      | 1988                    | 15                | C,CH                                 | 1769                             | 22           | 8       | 5             | 1       | 18              | 6       | 3             | 0.6     | 11  | 100   | 22          | 91    | 54          | 98    | 11          | 100   | 11          | 100   | 61          | 100   |                 | 101            |                             | 100    | 97                                       |     |                                    |                   |                             |  |
|                            |  | Denman                             | 271                                       | 2008                    | 3                 | CH,MF                                | 266                              | 27           | 10      | 5             | 2       | 8               | 4       | 2             | 0.4     | 12  | 100   | 24          | 100   | 51          | 100   | 1           | 100   | 12          | 100   | 117         | 100   |                 | 2              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Sandy Hollow                       | 22  | 2005                    | 1                 | CH,DF,OZ                             | 22                               | 5            | 2       | 1             | 1       | 15              | 8       | 3.7           | 1.2     | 12  | 100   | 24          | 58    | 50          | 100   | 1           | 100   | 1           | 100   | 26          | 100   |                 |                |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 2097                                      |                         | 18                |                                      | 2057                             | 27           | 9       | 5             | 1       | 18              | 5       | 4             | 0.6     | 35  | 100   | 70          | 83    | 155         | 99    | 13          | 100   | 24          | 100   | 204         | 100   | 100             | 103            | 18                          | 100    | 100                                      | Yes | 6                                  | 0                 | 0                           |  |
| Nambucca Shire Council     | GW   | Nambucca                           | 1453                                      | 2011                    | 23                | CH,U                                 | 1481                             |              |         | 1             | 1       |                 |         | 1             | 0.5     | 12  | 100   | 12          | 100   | 164         | 100   | 12          | 100   | 12          | 100   | 164         | 100   | 100             | 11             | 2                           | 100    | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
| Narrabri Shire Council     | GW   | Narrabri                           | 1846                                      | 2005                    | 18                | CH                                   | 1679                             | 17           | 3       | 5             | 2       | 2               | 0       | 2             | 0.3     | 26  | 100   | 28          | 88    | 24          | 100   | 12          | 100   | 12          | 100   | 51          | 100   |                 | 39             |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Wee Waa                            | 718                                       | 2006                    | 10                | CH                                   | 653                              | 3            | 3       | 3             | 3       | 3               | 3       | 3             | 2.5     | 6   | 100   | 6           | 88    | 24          | 100   |             | 100   |             | 100   | 51          | 100   |                 | 6              |                             |        | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Boggabri                           | 39  | 2005                    | 4                 | CH                                   | 36                               | 1            | 1       | 1             | 1       | 1               | 1       | 1             | 1.2     | 1   | 100   | 4           | 100   | 4           | 100   | 2           | 100   | 2           | 100   | 51          | 100   |                 | 1              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Gwabegar                           | 1   | 2006                    | 0.4               | CH                                   | 1                                | 4            | 3       | 4             | 3       | 0               | 0       | 0             | 0.2     | 6   | 100   | 6           | 96    | 24          | 100   | 2           | 100   | 2           | 100   | 26          | 100   |                 | 1              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Bellata                            | 4   | 2005                    | 0.4               | CH                                   | 3                                | 1            | 1       | 1             | 1       | 1               | 1       | 1             | 1.2     | 4   | 100   | 4           | 75    | 4           | 100   | 3           | 100   | 3           | 100   | 25          | 100   |                 | 1              |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            | GW   | Pilliga                            | 0   | 2006                    | 1                 | CH                                   | 0                                | 2            | 2       | 2             | 2       | 2               | 2       | 2             | 2.0     | 4   | 100   | 6           | 96    | 24          | 100   | 3           | 100   | 3           | 100   | 26          | 100   |                 |                |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 2608                                      |                         | 34                |                                      | 2372                             | 17           | 3       | 5             | 2       | 3               | 1       | 3             | 0.9     | 47  | 100   | 54          | 90    | 104         | 100   | 22          | 100   | 22          | 100   | 230         | 100   | 100             | 48             | 11                          | 100    | 100                                      | Yes | 4                                  | 0                 | 0                           |  |
| Narrandera Shire Council   | GW   | Narrandera                         | 2177                                      | -                       | 23                | CH                                   | 1600                             |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 12          | 100   | 12          | 100   | 71          | 100   |                 | -              | -                           | 100    | 100                                      | Yes | 2                                  | 0                 | 0                           |  |
| Narromine Shire Council    | GW   | Narromine                          | 1219                                      | 1989                    | 8.1               | DAF                                  | 734                              |              |         |               |         |                 |         |               |         |   |       |             |       | 69          | 98    |             | 100   |             | 100   | 62          | 100   | 100             | 0              | 0                           |        | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
| Oberon Council             | B-FR                                       | Oberon                             | 704                                       | 2002                    | 7                 | MF                                   | 627                              | 33           | 29      |               |         | 3               | 1       | 0             | 0.1     | 365   | 100   | 365         | 100   | 365         | 100   | 12          | 100   | 12          | 100   | 50          | 100   | 100             | 0              | 0                           | 100    | 98                                       | Yes | 3                                  | 0                 | 0                           |  |
| Orange City Council        | GW   | Icely Road                         | 4431                                      | 2001                    | 38                | C,OZ                                 | 4670                             | 10           | 8       | 1             | 1       | 23              | 3       | 0             | 0.2     | 12  | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 139         | 100   |                 | 25             |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Spring Hill/Lucknow                | 50  | -                       | 1                 | CH                                   | 53                               |              |         |               |         |                 |         | 0             | 0.1     | 2   | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 2           | 100   | 51          | 100   |                 |                |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 4481                                      |                         | 39                |                                      | 4722                             | 10           | 7       | 1             | 1       | 23              | 3       | 0             | 0.1     | 14  | 100   | 14          | 100   | 14          | 100   | 14          | 100   | 14          | 100   | 190         | 100   | 100             | 25             | 1                           | 100    | 100                                      | Yes | 3                                  | 0                 | 0                           |  |
| Palerang Council           | GW   | Braidwood                          | 162                                       | 2013                    | 2                 | DAF                                  | 162                              | 17           | 13      | 1             | 1       | 2               | 1       | 4             | 1.4     | 3   | 100   | 3           | 100   | 10          | 60    | 7           | 100   | 17          | 100   | 50          | 100   |                 |                |                             | 100    | 98                                       |     |                                    |                   |                             |  |
|                            |  | Bungendore                         | 278                                       | 2005                    | 4                 | CH                                   | 278                              | 2            | 1       | 2             | 1       | 0               | 0       | 0             | 0.3     | 5   | 100   | 5           | 100   | 54          | 94    | 7           | 100   | 17          | 100   | 50          | 100   |                 |                |                             | 100    | 98                                       |     |                                    |                   |                             |  |
|                            |  | Captains Flat                      | 51  | 2002                    | 1                 | MF                                   | 51                               | 61           | 55      | 4             | 2       | 10              | 5       | 3             | 1.2     | 5   | 100   | 4           | 100   | 32          | 98    | 7           | 100   | 17          | 100   | 25          | 100   |                 |                |                             | 100    | 100                                      |     |                                    |                   |                             |  |
|                            |  | Total/Weighted Average             | 491                                       |                         | 6                 |                                      | 491                              | 61           | 11      | 4             | 1       | 10              | 1       | 4             | 0.8     | 13  | 100   | 12          | 100   | 96          | 92    | 21          | 100   | 51          | 100   | 125         | 100   | 100             | 0              | 0                           | 100    | 98                                       | Yes | 6                                  | 0                 | 0                           |  |
| Parkes Shire Council       |  | Parkes                             | 2248                                      | 1994                    | 9                 | C                                    | 2190                             | 80           | 20      | 2             | 1       | 35              | 10      | 1             | 0.2     | 12  | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 12          | 100   | 116         | 100   | 100             | 11             | 2                           | 100    | 96                                       | Yes | 2                                  | 0                 | 0                           |  |
| Queanbeyan City Council    | B-ACT                                      | Reticulator                        | 0   | -                       |                   | -                                    |                                  |              |         |               |         |                 |         |               |         |   |       |             |       |             |       | 13          | 100   | 15          | 100   | 212         | 100   | 100             | -              | -                           | 100    | 97                                       | Yes |                                    |                   | 0                           | 0  |
| Richmond Valley Council    | B-RW                                       | Casino                             | 2256                                      | 1985                    | 23                | C                                    | 2451                             | 1,117        | 133     | 18            | 2       | 589             | 30      | 2             | 0.8     | 24  | 91    | 125         | 100   | 126         | 100   | 10          | 100   | 22          | 100   | 65          | 100   | 100             | 0              | 0                           | 100    | 100                                      | Yes | 1                                  | 0                 | 0                           |  |



## APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility                 | Source<br>/type<br>(Bulk<br>Supp<br>lier) <sup>9</sup> | Water Treatment Works <sup>1</sup><br><br>37a | Total<br>Potable<br>Water<br>Produced<br>W11.3<br>ML<br>37c | Year<br>built or<br>Augmented | Capacity<br><br>ML/d<br>37b | Type of<br>Treatment<br>Works <sup>2</sup><br><br>38a | Volume<br>Treated to<br>Potable<br><br>ML<br>38b | Colour Units |                  |                  |            | Turbidity Units |            |                  |            | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |          |                |          |                |          |                |          |                |          |                |          |                               |                   | Water<br>Quality<br>Complaints<br>C9 |     | No. of Samples<br>÷ Allocation <sup>6</sup> |     | Drinking Water<br>Mgmt System<br>(DWMS)?<br><br>44c | No. WTW<br>Operators<br><br>44d | Chlorination<br>System<br>Failure<br><br>45 | Major<br>Malfunction of<br>Treatment<br>Processes<br><br>46 |
|-------------------------------|--|---|---|-------------------------------|-----------------------------|---|--|--------------|------------------|------------------|------------|-----------------|------------|------------------|------------|---|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|-------------------------------|-------------------|--------------------------------------|-----|---|-----|---|---------------------------------|---|---|
|                               |  |   |   |                               |                             |   |  | Raw<br>Water |                  | Treated<br>Water |            | Raw<br>Water    |            | Treated<br>Water |            | Colour  |          | Turbidity      |          | pH             |          | Physical       |          | Chemical       |          | E. coli        |          | E. coli<br>% Pop'n<br><br>42n |                   |                                      |     |   |     |   |                                 |   |   |
|                               |  |   |   |                               |                             |   |  | Max<br>39a   | Avg<br>39b       | Max<br>39c       | Avg<br>39d | Max<br>40a      | Avg<br>40b | Max<br>40c       | Avg<br>40d | Samples<br>42a  | %<br>42b | Samples<br>42c | %<br>42d | Samples<br>42e | %<br>42f | Samples<br>42g | %<br>42h | Samples<br>42i | %<br>42j | Samples<br>42k | %<br>42l |                               | Compliance<br>42n |                                      |     |   |     |   |                                 |   |   |
|                               |  |   |   |                               |                             |   |  | No.<br>43    | / 1,000<br>Props | %<br>44a         | %<br>44b   | Yes/No          | No.<br>44d | days<br>45       | days<br>46 |   |          |                |          |                |          |                |          |                |          |                |          |                               |                   |                                      |     |   |     |   |                                 |   |   |
| Riverina Water County Council | GW   | Waterworks                                    | 6384  | 1961                          | 80                          | C   | 6051   | 210          | 55               | 7                | 2          | 34              | 80         | 9                | 0.6        | 12  | 100      | 383            | 99       | 382            | 98       | 12             | 100      | 12             | 100      | 384            | 100      |                               | 36                |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | West Wagga                                    | 5229  | 1979                          | 32                          | C   | 4956   | 26           |                  | 7                | 4          | 7               | 2          | 5                | 1.1        | 4   | 100      | 13             | 92       | 13             | 92       | 4              | 100      | 16             | 100      | 13             | 100      |                               | 30                |                                      |     |   |     |   |                                 |   |   |
|                               |  | North Wagga                                   | 2650  | 1977                          | 25                          | C   | 2512   | 27           | 3                | 1                | 1          | 1               | 0          | 7                | 0.6        | 12  | 100      | 126            | 98       | 127            | 100      | 12             | 100      | 12             | 100      | 126            | 100      |                               | 15                |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Ralvona                                       | 318   | 1989                          | 4                           | C   | 301  | 15           | 5                | 1                | 1          | 1               | 1          | 1                | 0.4        | 2   | 100      | 47             | 100      | 47             | 98       | 2              | 100      | 2              | 100      | 50             | 100      |                               | 2                 |                                      | 100 | 98  |     |   |                                 |   |   |
|                               | GW   | Bulgary                                       | 523   | 1983                          | 3                           | C   | 496  | 11           | 3                | 1                | 1          | 2               | 1          | 8                | 0.6        | 2   | 100      | 49             | 98       | 47             | 85       | 2              | 100      | 12             | 100      | 75             | 100      |                               | 2                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Gardiners Crossing                            | 193   | 1983                          | 2                           | C   | 183  | 2            |                  | 1                | 1          | 0               | 0          | 1                | 0.4        | 1   | 100      | 51             | 100      | 50             | 78       | 1              | 100      | 6              | 100      | 51             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Urana   | 55  | 1964                          | 1                           | C   | 52   | 754          | 161              | 1                | 1          | 90              | 23         | 2                | 0.4        | 2   | 100      | 50             | 100      | 50             | 96       | 2              | 100      | 5              | 100      | 50             | 100      |                               |                   |                                      | 100 | 98  |     |   |                                 |   |   |
|                               | GW   | Walbundrie                                    | 42  | 2005                          | 1                           | C   | 40   | 14           | 3                | 1                | 1          | 1               | 0          | 0                | 0.4        | 2   | 100      | 25             | 100      | 25             | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Humula  | 9   | 2003                          | 0.3                         | C   | 9  | 12           | 12               | 1                | 1          | 13              | 3          | 1                | 0.4        | 2   | 100      | 25             | 100      | 25             | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Woomargama                                    | 17  | 1960                          | 0.2                         | C   | 16   | 31           | 7                | 1                | 1          | 13              | 2          | 2                | 0.5        | 2   | 100      | 25             | 100      | 25             | 96       | 2              | 100      | 2              | 100      | 25             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Collingullie                                  | 77  | 2006                          | 0.1                         | C   | 73   | 6            | 1                | 1                | 1          | 1               | 0          | 0                | 0.3        | 2   | 100      | 12             | 100      | 12             | 100      | 2              | 100      | 2              | 100      | 12             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Tarcutta                                      | 47  | 2009                          | 1                           | C   | 45   | 372          | 156              | 1                | 1          | 39              | 8          | 0                | 0.4        | 2   | 100      | 25             | 100      | 25             | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | GW   | Oura  | 36  | 1982                          | 1                           | C   | 34   | 22           | 2                | 1                | 1          | 1               | 0          | 2                | 0.7        | 2   | 100      | 13             | 100      | 13             | 100      | 2              | 100      | 2              | 100      | 13             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  |   | Morundah  | 11                            | 1992                        | 0.2   | C  | 10           | 445              | 131              | 1          | 1               | 85         | 23               | 1          | 0.4   | 2        | 100            | 25       | 100            | 25       | 96             | 2        | 100            | 2        | 100            | 25       | 100                           |                   |                                      |     | 100   | 100 |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 15591   |                               | 150                         |   | 14778  | 754          | 24               | 7                | 2          | 90              | 34         | 9                | 0.8        | 49  | 100      | 869            | 99       | 866            | 97       | 49             | 100      | 79             | 100      | 899            | 100      | 100                           | 89                | 3                                    | 100 | 100   | Yes | 4   | 0                               | 0   |   |
| Rous County Council           |  | Emigrant Creek Dam                            | 454   | 2008                          | 8                           | MF  | 410  | 89           | 27               | 3                |            | 23              | 6          | 0                |            | 18  | 100      | 18             | 100      | 18             | 100      | 18             | 100      | 18             | 100      | 18             | 100      |                               |                   |                                      |     |   |     |   |                                 |   |   |
|                               |  | Rous Villages                                 |   | -                             |                             | -   | -  |              |                  |                  |            |                 |            |                  |            |   |          |                |          |                |          | 12             | 100      | 12             | 100      | 96             | 100      |                               | -                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Nightcap                                      | 10729   | 2007                          | 70                          | DAF,DF,O  | 9680   | 44           | 25               | 2                |            | 3               | 2          | 0                |            | 50  | 100      | 50             | 100      | 50             | 100      | 50             | 100      | 50             | 100      | 50             | 100      |                               |                   |                                      |     |   |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 11183   |                               | 78                          |   | 10090  | 89           | 25               | 3                |            | 23              | 2          | 0                |            | 68  | 100      | 68             | 100      | 68             | 100      | 80             | 100      | 80             | 100      | 164            | 100      | 100                           | 0                 | 0                                    |     |   | Yes | 4   | 0                               | 0   |   |
| Shoalhaven City Council       |  | Bamarang                                      | 9391  | 1999                          | 75                          | C   | 9178   | 45           | 31               | 3                | 0          | 3               | 1          | 2.8              | 0.5        | 12  | 100      | 12             | 100      | 92             | 97       | 92             | 100      | 92             | 100      | 586            | 100      |                               | 8                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Flatrock                                      | 1549  | 1998                          | 28                          | C   | 1514   | 45           | 31               | 5                | 0          | 3               | 1          | 2                | 0.5        | 5   | 100      | 5              | 100      | 31             | 100      | 31             | 100      | 31             | 100      | 72             | 100      |                               | 4                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Milton  | 1045  | 2000                          | 11                          | DF  | 1021   | 65           | 60               | 3                | 3          | 3               | 2          | 0                | 0.2        | 12  | 100      | 12             | 100      | 42             | 96       | 49             | 100      | 49             | 100      | 154            | 100      |                               | 13                |                                      | 100 | 98  |     |   |                                 |   |   |
|                               |  | Kangaroo Valley                               | 80  | 1993                          | 2                           | MF  | 78   | 175          | 56               | 10               | 0          | 27              | 8          | 1                | 0.1        | 2   | 100      | 2              | 100      | 14             | 100      | 14             | 100      | 23             | 100      | 50             | 100      |                               |                   |                                      | 100 | 98  |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 12065   |                               | 115                         |   | 11791  | 175          | 34               | 10               | 0          | 27              | 1          | 3                | 0.4        | 31  | 100      | 31             | 100      | 179            | 97       | 186            | 100      | 195            | 100      | 862            | 100      | 100                           | 25                | 1                                    | 100 | 100   | Yes | 8   | 0                               | 0   |   |
| Singleton Council             |  | Obanvale                                      | 2624  | 1993                          | 30                          | DF  | 2591   | 5            | 5                | 5                | 3          | 4               | 1          | 0.7              | 0.1        | 694   | 100      | 594            | 100      | 553            | 99       | 12             | 100      | 12             | 100      | 512            | 100      | 100                           | 24                | 4                                    | 100 | 100   | Yes | 4   | 0                               | 164   |   |
| Snowy River Shire Council     | UF   | East Jindabyne                                | 205   | 2012                          | 9                           | CH,U  | 251  |              |                  | 2                | 2          |                 |            | 1                | 0.8        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 14             | 100      | 52             | 100      |                               | 5                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | UF   | Jindabyne                                     | 341   | 2007                          | 8                           | CH,U  | 417  |              |                  | 3                | 2          |                 |            | 3                | 1.7        | 4   | 100      | 4              | 100      | 4              | 100      | 2              | 100      | 3              | 100      | 65             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | UF   | Adaminaby                                     | 44  | 2005                          | 2                           | CH  | 54   |              |                  | 1                | 1          |                 |            | 1.6              | 1.1        | 1   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 11             | 100      | 26             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               | UF   | Kalkite                                       | 12  | 2007                          | 2                           | CH  | 15   |              |                  | 2                | 2          |                 |            | 1                | 0.7        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 12             | 100      |                               |                   |                                      | 100 | 55  |     |   |                                 |   |   |
|                               |  | Dalgety                                       | 8   | 2004                          | 0.2                         | CH,MF   | 10   |              |                  | 1                | 1          |                 |            | 0                | 0.1        | 2   | 100      | 2              | 100      | 2              | 50       | 2              | 100      | 2              | 100      | 27             | 100      |                               | 1                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 611   |                               | 21                          |   | 747  |              |                  | 3                | 2          |                 |            | 3                | 1.3        | 11  | 100      | 12             | 100      | 12             | 92       | 10             | 100      | 32             | 100      | 182            | 100      | 100                           | 7                 | 1                                    | 100 | 100   | Yes | 7   | 0                               | 0   |   |
|                               | Tamworth Regional Council                              |   | Calala  | 6936                          | 2014                        | 80  | C  | 6961         | 71               | 22               | 1          | 1               | 8          | 3                | 2          | 0.5   | 8        | 100            | 8        | 100            | 8        | 100            | 16       | 100            | 8        | 100            | 176      | 100                           |                   |                                      |     | 73  | 100 |   |                                 |   |   |
|                               |  | Manilla                                       | 285   | 1990                          | 5                           | C   | 286  | 85           | 25               | 4                | 2          | 31              | 5          | 0                | 0.1        | 5   | 100      | 5              | 100      | 5              | 100      | 10             | 100      | 16             | 100      | 54             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Barraba                                       | 191   | 2015                          | 4                           | DAF   | 192  | 216          | 8                | 1                | 1          | 252             | 3          | 0                | 0.2        | 2   | 100      | 2              | 100      | 2              | 100      | 4              | 100      | 2              | 100      | 51             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
| GW                            |  | Attunga                                       | 64  | 1991                          | 3                           | CH  | 64   |              |                  | 1                | 1          |                 |            | 0                | 0.1        | 2   | 100      | 2              | 100      | 2              | 100      | 4              | 50       | 2              | 100      | 28             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
| GW                            |  | Nundle  | 43  | 1995                          | 1                           | LS  | 43   | 78           | 11               | 1                | 1          | 8               | 1          | 1                | 0.5        | 2   | 100      | 2              | 100      | 2              | 100      | 4              | 50       | 2              | 100      | 39             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Bendemeer                                     | 23  | 2007                          | 1                           | C   | 24   | 336          | 88               | 1                | 1          | 29              | 6          | 0                | 0.1        | 2   | 100      | 2              | 100      | 2              | 100      | 4              | 100      | 2              | 100      | 26             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
| GW                            |  | Kootingal/Moonbi                              | 285   | 1991                          |                             | CH  | 286  | 7            | 0                | 1                | 1          | 2               | 0          | 0                | 0.2        | 2   | 100      | 2              | 100      | 2              | 100      | 4              | 100      | 2              | 100      | 55             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 7827  |                               | 93                          |   | 7856   | 336          | 21               | 4                | 1          | 252             | 3          | 2                | 0.5        | 23  | 100      | 23             | 100      | 23             | 100      | 46             | 91       | 34             | 100      | 429            | 100      | 100                           | 0                 | 0                                    | 100 | 100   | Yes | 12  | 0                               | 0   |   |
| Tenterfield Shire Council     |  | Tenterfield                                   | 322   | 2004                          | 6                           | C   | 356  | 305          | 99               | 259              | 11         | 26              | 6          | 9.0              | 0.8        | 365   | 100      | 365            | 100      | 12             | 100      |                | 100      | 13             | 100      | 60             | 100      |                               | 2                 |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Urbenville                                    | 80  | 2010                          | 1                           | DAF   | 88   | 3,000        | 276              | 60               | 6          | 731             | 43         | 35               | 0.9        | 331   |          | 359            |          | 12             | 100      | 2              | 100      | 12             | 100      | 152            | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Jennings                                      |   | -                             |                             | C   | -  |              |                  |                  |            |                 |            |                  |            |   |          |                |          | 12             | 100      | 12             | 100      | 12             | 100      | 12             | 100      |                               |                   |                                      | 100 | 48  |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 402   |                               | 6                           |   | 444  | 3,000        | 134              | 259              | 10         | 731             | 13         | 35               | 0.8        | 696   | 52       | 724            | 50       | 36             | 100      | 14             | 100      | 37             | 100      | 224            | 100      | 100                           | 2                 | 1                                    | 100 | 100   | Yes | 4   | 0                               | 0   |   |
| Tumbarumba Shire Council      |  | Tumbarumba                                    | 205   | 2102                          | 3                           | DAF   | 279  |              |                  | 4                | 2          | 7               | 2          | 1                | 0.2        | 3   | 100      | 365            | 100      | 365            | 100      |                | 100      | 4              | 100      | 48             | 100      |                               |                   |                                      | 100 | 94  |     |   |                                 |   |   |
|                               |  | Khancoban                                     | 70  | 1960                          | 2                           | CH  | 95   |              |                  | 6                | 4          |                 |            | 1                | 0.3        | 3   | 100      | 3              | 100      | 3              | 100      |                | 100      | 3              | 100      | 26             | 100      |                               |                   |                                      | 100 | 100   |     |   |                                 |   |   |
|                               |  | Total/Weighted Average                        | 275   |                               | 5                           |   | 374  |              |                  | 6                | 3          | 7               | 2          | 1                | 0.2        | 6   | 100      | 368            | 100      | 368            | 100      |                | 100      | 7              | 100      | 74             | 100      | 100                           | 0                 | 0                                    | 100 | 97  | Yes | 2   | 0                               | 0   |   |

## APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility              | Source<br>/type<br>(Bulk<br>Supp<br>lier) <sup>9</sup> | Water Treatment Works <sup>1</sup><br><br>37a | Total<br>Potable<br>Water<br>Produced<br>W11.3<br>ML<br>37c | Year built or<br>Augmented | Capacity<br><br>ML/d<br>37b | Type of<br>Treatment<br>Works <sup>2</sup><br><br>38a | Volume<br>Treated to<br>Potable<br><br>ML<br>38b | Colour Units |            |                  |            | Turbidity Units |            |                  |            | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |          |                |          |                |          |                |          |                |          |                |          | Water<br>Quality<br>Complaints<br>C9 |           | No. of Samples<br>÷ Allocation <sup>6</sup><br><br>Chemical<br>E. coli |          | Drinking Water<br>Mgmt System<br>(DWMS)?<br><br>44c | No. WTW<br>Operators<br><br>44d | Chlorination<br>System<br>Failure<br><br>45 | Major<br>Malfunction of<br>Treatment<br>Processes |                               |
|----------------------------|--|---|---|----------------------------|-----------------------------|---|--|--------------|------------|------------------|------------|-----------------|------------|------------------|------------|---|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|--------------------------------------|-----------|--|----------|---|---------------------------------|---|---|-------------------------------|
|                            |  |   |   |                            |                             |   |  | Raw<br>Water |            | Treated<br>Water |            | Raw<br>Water    |            | Treated<br>Water |            | Colour  |          | Turbidity      |          | pH             |          | Physical       |          | Chemical       |          | E. coli        |          |                                      |           |  |          |   |                                 |   |   | E. coli<br>% Pop'n<br><br>42n |
|                            |  |   |   |                            |                             |   |  | Max<br>39a   | Avg<br>39b | Max<br>39c       | Avg<br>39d | Max<br>40a      | Avg<br>40b | Max<br>40c       | Avg<br>40d | Samples<br>42a  | %<br>42b | Samples<br>42c | %<br>42d | Samples<br>42e | %<br>42f | Samples<br>42g | %<br>42h | Samples<br>42i | %<br>42j | Samples<br>42k | %<br>42l | Compliance<br>42n                    | No.<br>43 | / 1,000<br>Props   | %<br>44a |   |                                 |   |   |                               |
| Tumut Council              |  | Tumut   | 1175  | 1978                       | 16                          | C   | 1157   | 250          | 13         | 10               | 5          | 44              | 3          | 2                | 0.2        | 365   | 100      | 365            | 100      | 10             | 100      | 7              | 100      | 7              | 100      | 56             | 100      |                                      | 12        |  | 64       | 81  |                                 |   |   |                               |
|                            |  | Batlow  | 189   | 2001                       | 3                           | MF  | 186  | 200          | 67         | 15               | 8          | 7               | 3          | 0                | 0.1        | 365   | 100      | 365            | 100      | 1              | 100      | 1              | 100      | 3              | 100      | 36             | 100      |                                      | 1         |  | 100      | 71  |                                 |   |   |                               |
|                            |  | Talbingo                                      | 56  | 1995                       | 2                           | DF  | 55   | 50           | 16         | 3                | 3          | 4               | 1          | 0                | 0.1        | 365   | 100      |                |          | 2              | 100      | 2              | 100      | 2              | 100      | 24             | 100      |                                      |           |  | 100      | 96  |                                 |   |   |                               |
|                            |  | Brungle                                       | 10  | 2003                       | 0.3                         | MF  | 10   | 250          | 20         | 10               | 3          | 59              | 6          | 1                | 0.2        | 94  | 100      | 94             | 100      | 94             | 100      | 1              | 100      | 2              | 100      | 19             | 95       |                                      |           |  | 100      | 54  |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 1430  |                            | 21                          |   | 1408   | 250          | 20         | 15               | 5          | 59              | 3          | 2                | 0.2        | 1,189   | 100      | 824            | 100      | 107            | 100      | 11             | 100      | 14             | 100      | 135            | 99       | 99                                   | 13        | 3  | 100      | 75  | Yes                             | 6   | 0   | 0                             |
| Tweed Shire Council        |  | Bray Park                                     | 8603  | 2010                       | 100                         | MF  | 8610   | 52           | 19         | 3                | 0          | 52              | 8          | 1                | 0.2        | 53  | 100      | 107            | 100      | 1,664          | 80       | 12             | 100      | 12             | 100      | 564            | 100      |                                      | 188       |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Uki   | 31  | 1998                       | 1                           | C   | 31   | 52           | 27         | 4                | 0          | 70              | 8          | 4                | 0.4        | 105   | 100      | 105            | 100      | 158            | 58       | 2              | 100      | 2              | 100      | 24             | 100      |                                      | 1         |  | 100      | 96  |                                 |   |   |                               |
|                            |  | Tyalgum                                       | 27  | 2012                       | 0.3                         | MF  | 27   | 52           | 14         | 2                | 0          | 31              | 6          | 0                | 0.2        | 53  | 100      | 105            | 100      | 106            | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 8661  |                            | 101                         |   | 8667   | 52           | 19         | 4                | 0          | 70              | 8          | 4                | 0.2        | 211   | 100      | 317            | 100      | 1,928          | 79       | 16             | 100      | 16             | 100      | 613            | 100      | 100                                  | 189       | 6  | 100      | 100   | Yes                             | 5   | 0   | 0                             |
| Upper Hunter Shire Council | UF<br>GW<br>GW   | Murrurundi                                    | 102   | 1983                       | 2                           | CH  | 102  |              |            |                  | 1          | 1               |            | 5                | 2.1        | 2   | 100      | 57             | 98       | 361            | 55       | 362            | 97       | 2              | 100      | 59             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Merriwa                                       | 258   | 1980                       | 2                           | C   | 258  |              |            |                  | 1          | 1               |            | 0                | 0.1        | 2   | 100      | 2              | 2        | 2              | 100      | 2              | 100      | 2              | 100      | 49             | 100      |                                      |           |  | 100      | 96  |                                 |   |   |                               |
|                            |  | Cassilis                                      | 15  | 2001                       | 1                           | CH  | 15   |              |            |                  | 1          | 1               |            | 1                | 0.8        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Scone And Aberdeen                            | 2200  | 1982                       | 20                          | CH  | 2200   |              |            |                  | 1          | 1               |            | 1                | 0.4        | 14  | 100      | 14             | 100      | 14             | 100      | 14             | 100      | 2              | 100      | 134            | 100      |                                      | 3         |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 2575  |                            | 25                          |   | 2575   |              |            |                  | 1          | 1               |            | 5                | 0.4        | 20  | 100      | 75             | 96       | 379            | 57       | 380            | 97       | 8              | 100      | 267            | 100      | 100                                  | 3         | 1  | 100      | 100   | Yes                             | 5   | 0   | 0                             |
| Upper Lachlan Council      | GW<br>UF   | Crookwell                                     | 272   | 1990                       | 3                           | C   | 315  | 60           | 20         | 5                | 3          | 4               | 3          | 0                | 0.3        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 12             | 100      | 49             | 100      |                                      |           |  | 100      | 96  |                                 |   |   |                               |
|                            |  | Gunning                                       | 73  | 2014                       | 1                           | DAF   | 85   | 200          | 50         | 1                | 1          | 120             | 20         | 0.3              | 0.2        | 4   | 100      | 4              | 100      | 4              | 100      | 4              | 100      | 4              | 100      | 74             | 100      |                                      |           |  | 100      | 97  |                                 |   |   |                               |
|                            |  | Taralga                                       | 43  | 2014                       | 0.3                         | MF  | 50   | 10           | 9          | 1                | 1          | 2               | 2          | 0                | 0.1        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 25             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 388   |                            | 4                           |   | 450  | 200          | 24         | 5                | 2          | 120             | 6          | 0                | 0.3        | 8   | 100      | 8              | 100      | 8              | 100      | 8              | 100      | 18             | 100      | 148            | 100      | 100                                  | 0         | 0  | 100      | 97  | Yes                             | 4   | 0   | 0                             |
| Uralla Shire Council       |  | Kentucky Creek                                | 272   | 1985                       | 5                           | C   | 269  | 56           | 30         | 3                | 2          | 67              | 10         | 2                | 0.4        | 2   | 100      | 52             | 100      | 2              | 100      | 2              | 100      | 11             | 100      | 52             | 100      |                                      | 2         |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Bundarra                                      | 48  | 1994                       | 1                           | C,LS  | 48   | 175          | 70         | 1                | 1          | 19              | 5          | 0                | 0.3        | 3   | 100      | 21             | 100      | 21             | 100      | 3              | 100      | 12             | 100      | 21             | 100      |                                      |           |  | 100      | 84  |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 320   |                            | 6                           |   | 317  | 175          | 36         | 3                | 2          | 67              | 9          | 2                | 0.4        | 5   | 100      | 73             | 100      | 23             | 100      | 5              | 100      | 23             | 100      | 73             | 100      | 100                                  | 2         | 1  | 100      | 96  | Yes                             | 4   | 0   | 0                             |
| Wakool Shire Council       | DS   | Wakool Rural/Town                             | 81  | 2004                       | 1                           | MF  | 95   | 550          | 490        |                  |            | 105             | 70         |                  |            | 26  | 100      | 26             | 100      | 26             | 100      | 26             | 100      | 26             | 100      | 26             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Barham  | 100   | 1994                       | 2                           | LS  | 118  | 515          | 440        | 1                |            | 190             | 78         | 1                |            | 26  | 100      | 26             | 100      | 26             | 100      | 1              | 100      | 1              | 100      | 45             | 100      |                                      |           |  | 100      | 88  |                                 |   |   |                               |
|                            |  | Moulamein                                     | 36  | 2002                       | 1                           | MF  | 43   | 520          | 260        |                  |            | 70              | 33         |                  |            | 26  | 100      | 26             | 100      | 26             | 100      |                | 100      |                | 100      | 26             | 100      |                                      |           |  | 100      |   |                                 |   |   |                               |
|                            |  | Koraleigh (Raw Water)                         | 7   | 2004                       | 0.1                         | MF  | 8  | 380          | 142        |                  |            | 58              | 20         |                  |            | 26  | 100      | 26             | 100      | 26             | 100      |                | 100      |                | 100      | 26             | 100      |                                      |           |  | 100      |   |                                 |   |   |                               |
|                            |  | Tooleybuc                                     | 37  | 2004                       | 0.3                         | MF  | 44   | 325          | 135        | 2                |            | 225             | 81         | 1                |            | 26  | 100      | 26             | 100      | 26             | 100      |                | 100      |                | 100      | 22             | 100      |                                      |           |  | 88       |   |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 261   |                            | 4                           |   | 308  | 550          | 379        | 2                |            | 225             | 68         | 1                |            | 130   | 100      | 130            | 100      | 130            | 100      | 27             | 100      | 27             | 100      | 145            | 100      | 100                                  | 0         | 0  | 100      | 100   | Yes                             | 4   | 0   | 0                             |
| Walcha Council             |  | Walcha  | 172   | 1985                       | 5                           | C   | -  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          | 2              | 100      | 11             | 100      | 53             | 100      | 100                                  | -         | -  | 100      | 100   | Yes                             | 4   | 0   | 0                             |
| Walgett Shire Council      | NP<br>NP<br>DS<br>DS<br>DS                             | Carinda                                       |   | 2007                       | 0.1                         |   |  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          |                |          |                |          |                |          |                                      |           |  |          |   |                                 |   |   |                               |
|                            |  | Rowena  |   | 2005                       | 1                           |   |  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          |                |          |                |          |                |          |                                      |           |  |          |   |                                 |   |   |                               |
|                            |  | Lightning Ridge                               | 1397  | 1999                       | 3                           | U   | 600  |              |            |                  |            |                 |            |                  |            |   |          |                |          | 2              | 100      | 2              | 100      | 46             | 98       |                |          |                                      |           | 100  | 90       |   |                                 |   |   |                               |
|                            |  | Walgett                                       | 698   | 2015                       | 2                           | C   | 300  |              |            |                  |            | 1,000           | 100        | 1                | 0.3        |   |          | 365            | 100      | 365            | 100      | 3              | 100      | 3              | 100      | 52             | 100      |                                      |           |  | 100      | 83  |                                 |   |   |                               |
|                            |  | Collarenebri                                  | 161   | 1196                       | 1                           | MF  | 69   |              |            |                  |            | 100             | 100        | 1                | 0.5        |   |          |                |          | 1              | 100      | 1              | 100      | 52             | 96       |                |          |                                      | -         |  | 100      | 83  |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 2256  |                            | 5                           |   | 969  |              |            |                  |            | 1,000           | 38         | 1                | 0.1        |   |          | 365            | 100      | 365            | 100      | 6              | 100      | 6              | 100      | 150            | 98       | 93                                   | 0         | 0  | 100      | 85  | Yes                             | 1   | 0   | 0                             |
|                            |  |   |   |                            |                             |   |  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          |                |          |                |          |                |          |                                      |           |  |          |   |                                 |   |   |                               |
| Warren Shire Council       | NP<br>GW<br>DS<br>B-NSW                                | Collie  |   | 2014                       | 0.1                         |   |  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          |                |          |                |          |                |          | 4                                    |           |  |          |   |                                 |   |   |                               |
|                            |  | Neverire                                      | 35  | 1983                       | 0.1                         | CH  | 31   | 1            | 1          | 1                | 1          | 0               | 0          | 0                | 0.1        | 2   | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 2              | 100      | 24             | 100      |                                      | 6         |  | 100      | 96  |                                 |   |   |                               |
|                            |  | Warren Chlorinator                            | 344   | 2000                       | 3.5                         | CH  | 303  | 1            | 1          | 1                | 1          | 0               | 0          | 0                | 0.1        | 1   | 100      | 1              | 100      | 40             | 100      | 1              | 100      | 1              | 100      | 40             | 100      |                                      | 9         |  | 100      | 78  |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 379   |                            | 4                           |   | 334  | 1            | 1          | 1                | 1          | 0               | 0          | 0                | 0.1        | 3   | 100      | 3              | 100      | 42             | 100      | 3              | 100      | 3              | 100      | 64             | 100      | 100                                  | 15        | 16   | 100      | 84  | Yes                             | 3   | 0   | 0                             |
| Warrumbungle Shire Council | GW<br>GW<br>GW<br>GW<br>GW<br>GW<br>GW                 | Coonabarabran                                 | 353   | 1993                       | 8                           | C   | 437  | 20           | 10         |                  |            | 2               | 1          | 6                | 0.5        | 365   | 100      | 365            | 100      | 365            | 100      | 4              | 100      | 14             | 100      | 56             | 100      |                                      | 3         |  | 100      | 89  |                                 |   |   |                               |
|                            |  | Binnaway                                      | 119   | 1993                       | 1                           | C   | 147  | 30           | 18         |                  |            | 135             | 2          | 1                | 0.5        | 365   | 100      | 365            | 100      | 365            | 100      | 3              | 100      | 13             | 100      | 52             | 100      |                                      | 1         |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Dunedoo                                       | 157   | 1984                       | 1                           | CH  | 195  |              |            |                  |            |                 |            |                  |            |   |          |                |          | 261            | 100      | 3              | 100      | 3              | 100      | 48             | 100      |                                      | 1         |  | 100      | 94  |                                 |   |   |                               |
|                            |  | Coolah  | 122   | 1996                       | 1                           | CH  | 151  |              |            |                  |            |                 |            |                  |            |   |          |                |          | 261            | 100      | 3              | 100      | 3              | 100      | 50             | 100      |                                      |           |  | 100      | 98  |                                 |   |   |                               |
|                            |  | Baradine                                      | 134   | 2002                       | 1                           | C   | 166  |              |            |                  |            |                 |            | 1                | 0.5        |   |          | 365            | 100      | 365            | 100      | 3              | 100      | 13             | 100      | 58             | 100      |                                      | 1         |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Mendooran                                     | 108   | 2009                       | 1                           | LS  | 134  |              |            |                  |            |                 |            | 3                | 0.4        |   |          | 205            | 100      | 299            | 100      | 4              | 100      | 4              | 100      | 52             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Bugaldie                                      | 4   | 1960                       |                             | CH  | 5  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          | 4              | 100      | 4              | 100      | 13             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Kenebri                                       | 4   | 1950                       |                             | CH  | 5  |              |            |                  |            |                 |            |                  |            |   |          |                |          |                |          | 4              | 100      | 4              | 100      | 24             | 100      |                                      |           |  | 100      | 100   |                                 |   |   |                               |
|                            |  | Total/Weighted Average                        | 1000  |                            | 13                          |   | 1240   | 30           | 6          |                  |            | 135             | 1          | 6                | 0.3        | 730   | 100      | 1,300          | 100      | 1,916          | 100      | 28             | 100      | 58             | 100      | 353            | 100      | 100                                  | 6         | 2  | 100      | 100   | Yes                             | 11  | 0   | 0                             |



APPENDIX D1: 2014-15 WATER TREATMENT PERFORMANCE

| Water Utility                              | Source /type (Bulk Supp lier) <sup>9</sup> | Water Treatment Works <sup>1</sup> | Total Potable Water Produced W11.3 ML 37c | Year built or Augmented | Capacity ML/d 37b | Type of Treatment Works <sup>2</sup> 38a | Volume Treated to Potable ML 38b | Colour Units |     |               |     | Turbidity Units |     |               |     | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines <sup>3, 7</sup> |                        |           |     |         |     |          |       |          |     |         |                                |                 |            | Water Quality Complaints C9 |       | No. of Samples ÷ Allocation <sup>6</sup> |            | Drinking Water Mgmt System (DWMS)? | No. WTW Operators | Chlorination System Failure | Major Malfunction of Treatment Processes |
|--|--|------------------------------------|---|-------------------------|-------------------|--|----------------------------------|--------------|-----|---------------|-----|-----------------|-----|---------------|-----|---|------------------------|-----------|-----|---------|-----|----------|-------|----------|-----|---------|--------------------------------|-----------------|------------|-----------------------------|-------|--|------------|------------------------------------|-------------------|-----------------------------|--|
|  |  |                                    |   |                         |                   |  |                                  | Raw Water    |     | Treated Water |     | Raw Water       |     | Treated Water |     | Colour  |                        | Turbidity |     | pH      |     | Physical |       | Chemical |     | E. coli |                                | E. coli % Pop'n |            |                             |       |  |            |                                    |                   |                             |  |
|  |  |                                    |   |                         |                   |  |                                  | Max          | Avg | Max           | Avg | Max             | Avg | Max           | Avg | Samples   | %                      | Samples   | %   | Samples | %   | Samples  | %     | Samples  | %   | Samples | %                              |                 | Compliance |                             |       |  |            |                                    |                   |                             |  |
|  |  |                                    |   |                         |                   |  |                                  | 39a          | 39b | 39c           | 39d | 40a             | 40b | 40c           | 40d | 42a   | 42b                    | 42c       | 42d | 42e     | 42f | 42g      | 42h   | 42i      | 42j | 42k     | 42l                            | 42n             | No. 43     | / 1,000 Props               | % 44a | % 44b                                    | Yes/No 44c |                                    |                   |                             |  |
| Wellington Council                         | RA   | Wellington                         | 1176                                      | 1993                    | 15                | LS                                       | 1064                             | 8            | 5   | 1             | 1   | 14              | 3   | 1             | 0.2 | 52  | 100                    | 365       | 100 | 365     | 100 | 13       | 100   | 13       | 100 | 100     | 100                            |                 |            |                             | 100   | 100                                      |            |                                    |                   |                             |  |
|  | RA   | Geurie                             | 119                                       | 1996                    | 2                 | LS                                       | 108                              | 8            | 5   | 1             | 1   | 18              | 6   | 8             | 0.3 | 365   | 100                    | 365       | 100 | 365     | 100 | 4        | 100   | 4        | 100 | 33      | 97                             |                 |            |                             | 100   | 65                                       |            |                                    |                   |                             |  |
|  |  | Total/Weighted Average             | 1295                                      |                         | 16                |  | 1172                             | 8            | 5   | 1             | 1   | 18              | 3   | 8             | 0.2 | 417   | 100                    | 730       | 100 | 730     | 100 | 17       | 100   | 17       | 100 | 133     | 99                             | 91              | 0          | 0                           | 100   | 100                                      | Yes        | 2                                  | 1                 | 0                           |  |
| Wentworth Shire Council                    | RA   | Buronga/Gol-Gol/Dareton            | 294                                       | 1994                    | 4                 | LS                                       | 527                              |              |     | 1             | 1   |                 |     | 1             | 0.3 | 2   | 100                    | 14        | 100 | 14      | 16  | 1        | 100   | 2        | 100 | 88      | 100                            |                 | 6          |                             | 100   | 99                                       |            |                                    |                   |                             |  |
|  | RA   | Wentworth                          | 116                                       | 1991                    | 1                 | C  | 208                              |              |     | 1             | 1   |                 |     | 0             | 0.2 | 2   | 100                    | 2         | 100 | 2       | 100 | 1        | 100   | 2        | 100 | 51      | 100                            |                 | 8          |                             | 100   | 100                                      |            |                                    |                   |                             |  |
|  | RA   | Pooncarie                          | 4   | 1996                    | 0.2               | LS                                       | 7                                |              |     | 2             | 1   |                 |     | 0             | 0.2 | 2   | 100                    | 2         | 100 | 2       | 100 | 26       | 100   | 2        | 100 | 24      | 100                            |                 |            |                             | 100   | 96                                       |            |                                    |                   |                             |  |
|  | DS   | Total/Weighted Average             | 414                                       |                         | 5                 |  | 742                              |              |     | 2             | 1   |                 |     | 1             | 0.3 | 6   | 100                    | 18        | 100 | 18      | 35  | 28       | 100   | 6        | 100 | 163     | 100                            | 100             | 14         | 6                           | 100   | 99                                       | Yes        | 2                                  | 0                 | 0                           |  |
| Wingecarribee Shire Council                | B-NSW                                      | Wingecarribee                      | 4032                                      | 2001                    | 40                | DAF                                      | 4446                             | 100          | 51  | 3             | 3   | 57              | 11  | 1             | 0.4 | 330   | 100                    | 330       | 100 | 11      | 100 | 10       | 100   | 10       | 100 | 338     | 100                            |                 | 136        |                             | 91    | 100                                      |            |                                    |                   |                             |  |
|  |  | Bundanoon                          | 503                                       | 1988                    | 10                | DAF                                      | 555                              | 150          | 69  | 3             | 3   | 37              | 6   | 1             | 0.5 | 362   | 100                    | 362       | 100 | 7       | 100 | 7        | 100   | 12       | 100 | 71      | 100                            |                 | 11         |                             | 100   | 100                                      |            |                                    |                   |                             |  |
|  |  | Total/Weighted Average             | 4535                                      |                         | 50                |  | 5001                             | 150          | 53  | 3             | 3   | 57              | 11  | 1             | 0.4 | 692   | 100                    | 692       | 100 | 18      | 100 | 17       | 100   | 22       | 100 | 409     | 100                            | 100             | 147        | 8                           | 100   | 100                                      | Yes        | 3                                  | 0                 | 0                           |  |
| Wyong Water                                |  | Mardi                              | 16021                                     | 1994                    | 160               | DF                                       | 17027                            | 83           | 66  | 10            | 5   | 10              | 5   | 1             | 0.3 | 360   | 100                    | 360       | 100 | 472     | 100 | 12       | 100   | 12       | 100 | 435     | 100                            | 100             | 635        | 10                          | 100   | 100                                      | Yes        | 3                                  | 0                 | 0                           |  |
| Yass Valley Council                        |  | Yass                               | 848                                       | 1989                    | 13                | DAF                                      | 821                              | 662          | 146 | 40            | 7   | 76              | 24  | 2             | 0.5 | 365   | 97                     | 365       | 100 | 101     | 100 | 12       | 100   | 12       | 100 | 100     | 100                            | 100             | 6          | 2                           | 100   | 100                                      | Yes        | 3                                  | 0                 | 0                           |  |
| Young Shire Council                        | B-GF                                       | Reticulator                        |   | -                       |                   | -  |                                  |              |     | 2             | 1   |                 |     | 1             | 0.3 | 6   | 100                    | 6         | 100 | 6       | 100 | 8        | 100   | 8        | 100 | 42      | 100                            | 100             | 5          | 1                           | 73    | 67                                       | Yes        |                                    | 0                 | 0                           |  |
| Total Capacity of 2,790 ML/d               |  |                                    |   |                         |                   | 163                                      | WTWs (Note 1)                    |              |     |               |     |                 |     |               |     |   | Total No. of Samples   |           |     |         |     |          | 4,600 | 4,800    |     | 19,400  | 4,430 water quality complaints |                 |            |                             |       |  |            |                                    |                   |                             |  |
| Total Potable Water Produced of 255,000 ML |  |                                    |   |                         |                   | 73                                       | Chlorinators/aerators (Note 1)   |              |     |               |     |                 |     |               |     |   | % of Samples Complying |           |     |         |     |          | 98.3% | 99.9%    |     | 99.9%   | 3 per 1,000 properties         |                 |            |                             |       |  |            |                                    |                   |                             |  |
|  |  |                                    |   |                         |                   | 236                                      | Total                            |              |     |               |     |                 |     |               |     |   | LWUs Complying         |           |     |         |     |          | 100%  | 100%     |     | 100%    |                                |                 |            |                             |       |  |            |                                    |                   |                             |  |

- Notes:**
- The total number of water treatment works (WTW) involving at least filtration and disinfection is 163. These include C, DF, DAF, LS, MF and D (Note 2 below). The total number of chlorinators/aerators is 73. These include CH, A, OZ and UV (Note 2 below). Where a LWU has more than one treatment works/chlorinator, the compliance values have been pro-rated on the basis of the number of samples tested at each treatment works/chlorinator and are shown in bold in the final line for that LWU.  
The capacity (37b), potable water produced (37c), number of samples (eg. 42a) and number of water quality complaints (43) shown above are the totals for all treatment works with potable supply for that LWU. The number of days of chlorination system failure (45), and the number of days of major malfunction of treatment processes (46) shown above are the weighted average based on treatment works capacity. Non-potable supplies are not included in totals or compliance. Potable water produced (W11.3) for each WTW has been determined from the total potable water produced by the LWU pro-rated by the volume treated to potable for the WTW divided by the total volume treated to potable for that utility.
  - For "Type of Treatment Works" (38a): A = Aerated & Disinfected, C = Conventional Water Treatment, CH = Chlorination Only, DF = Direct Filtration, DAF = Dissolved Air Flotation, LS = Lagoon Sedimentation, MF = Microfiltration, D = Desalination, OZ = Ozonation, UV = Ultra-Violet Disinfection, NIL = No Treatment. As indicated in Note 1 above, water treatment works involving at least filtration and disinfection is limited to C, DF, DAF, LS, MF and D.
  - Physical, Chemical and *E. coli* results are from the NSW Health Drinking Water Monitoring Program and/or from the NSW Performance Monitoring Database.
  - A recent review has found that some LWUs had overstated physical and chemical compliance by reporting the number of analytes rather than the number of samples. Compliance is calculated as a percentage of samples so columns 42g and 42j above have been corrected by using the results provided by the NSW Health Drinking Water Monitoring Program. However, the reporting of additional samples has been accepted for those LWUs that have confirmed that they have undertaken additional sampling to that required by the Drinking Water Program (eg. MidCoast Water and Goldenfields Water). Note that commencing in the 2012-13 financial year, such additional sampling reported by LWUs is only included in Appendix D1 if the testing has been undertaken by a NATA accredited laboratory.
  - The additional Physical, Chemical and *E. coli* results from the NSW Health Drinking Water Monitoring Program have also been included in Tables 5 and 12 on pages 116 and 183 and Figures 15 to 17 on pages 53 to 55. As shown above and in Table 9 on page 169, the number of LWU water treatment works is 163 and the number of chlorinator/aerators is 73 (ie. a total of 236).
  - NSW Health provides Chemical and Microbiological monitoring allocations for each LWU. The sampling reported to NSW Health has been augmented to include sampling reported by LWUs for the NSW Performance Monitoring Database but not included in the Drinking Water Program (44a) and (44b). Columns 44a and 44b show that almost all LWUs have tested 100% of their allocated samples by NSW Health for chemical and *E. coli* water quality.
  - The basis for assessing drinking water quality compliance is set out in section H4.6 on page 355. In summary, a LWU has complied with the guidelines for microbiological water quality (ie. it is shown as "Yes" in Tables 5 and 12) if the required number of samples has been tested and at least 98% of samples had no *E. coli*.  
Similarly, chemical water quality (health related) is satisfactory (shown as compliant - 'Yes' in Tables 5 and 12)) if the 95th percentile of results meets the guidelines, and physical (aesthetic) water quality is satisfactory if the mean value of results meets the guideline values (shown as compliant - 'Yes' in Table 12).
  - The total water treatment capacity in regional NSW is 2,790 ML/d (column 37b) and the total potable water produced is 255 GL (column 37c). The total number of water quality complaints is 4,430 and the Statewide median is 3 complaints per 1,000 properties (columns 43).
  - All LWUs have met the physical, chemical and *E. coli* water quality requirements of ADWG (columns 42h, 42j and 42k).
  - All LWUs have a Drinking Water Management System (DWMS - column 44c).
  - The total number of fully qualified water treatment operators is 348 (column 44d). Refer also to Appendix I on page 360 and to page 36. Information on the DPI Water section 61 Reports for each treatment works is available in the NSW Performance Monitoring Database (refer to page 356).
  - For "Source/type (Bulk Supplier)": DS = dual supply, GW = groundwater, GQGW = good quality groundwater, ML = Menindee Lakes (Water NSW), NP = non-potable, RA = river abstraction (Water NSW), UF = unfiltered, B-ACT = bulk purchase (ACTEW), B-Alb = bulk purchase (Albury), B-FR = bulk purchase (Fish River), B-GF = bulk purchase (Goldenfields Water), B-Mrm = bulk purchase (Murrumbidgee Irrigation), B-Mry = bulk purchase (Murray Irrigation), B-RW = bulk purchase (Rous Water), B-NSW = bulk purchase (Water NSW).



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility             | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           | Odour Complaints |     | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |                 |   |
|---------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|-----------|------------------|-----|----------------------------------|--|----------------------|---------------|---|-----------------|---|
|                           |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |           | Overall Result   | No. |                                  |  |                      |               |   | No./ 1000 props |   |
|                           |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples | % Samples        |     |                                  |  |                      |               |   |                 |   |
|                           |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70        | 71        | 72               | 68  | 69                               | E4 % 63  | 64a                  | 64b           | days 65                                 | days 67         |   |
| Albury City Council       | 100% No                     | Albury (Kremur St)                    | 1987                    | 40,000          | T                                  | BNR                                  | Y                | Y                  | L                               | 2,560                                | 1,199                       | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 85        | NL         | 100       | 6.5 - 8.5 | 100       | 85               | 11  |                                  |  | Yes                  |               | 13                                      | 0               |   |
|                           |                             | Albury (Waterview)                    | 1999                    | 26,500          | AT                                 | BNR                                  | Y                | Y                  | L                               | 1,855                                | 1,199                       | 12   | 100       | 15   | 100       | 15      | 100       | 5                 | 77        | 2            | 85        | 1       | 100       | 300        | 31        | 6.5 - 8.5 | 100       | 31               | 8   |                                  |  | Yes                  |               | 13                                      | 0               |   |
|                           |                             | Hume Weir                             | 1980                    | 500             | T                                  | IEA                                  |                  |                    | R                               | 18                                   |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | 4             | 0                                       |                 |   |
|                           |                             | Lara Lakes                            | 1990                    | 200             | S                                  | A                                    |                  |                    | L                               | 11                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | 12            | 0                                       |                 |   |
|                           |                             | Total/Weighted Average                |                         | 67,200          |                                    |                                      |                  |                    | L R                             | 4,444                                | 2,398                       | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 90        | 10           | 94        | 1       | 91        | NL         | 71        | 6.5 - 8.5 | 100       | 63               | 19  | 0.8                              | 63   |                      | 4             | 42                                      | 0               |   |
| Armidale Dumaresq Council |                             | Armidale                              | 1989                    | 22,000          | T                                  | TF                                   |                  |                    | R                               | 2,227                                | 910                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 13  | 1.5                              | 100  | Yes                  | 4             | 12                                      | 0               |   |
| Ballina Shire Council     | 100%                        | Ballina                               | 2014                    | 37,000          | AT                                 | MBR                                  | Y                | Y                  | O                               | 2,954                                | 233                         | 10   | 100       | 15   | 100       | 10      | 74        | 2                 | 100       | 5            | 100       | 0.5     | 100       | 200        | 100       | NL        | 100       | 74               | 10  |                                  |  | Yes                  |               | 23                                      | 0               |   |
|                           | 100%                        | Lennox Head                           | 2011                    | 28,000          | AS                                 | IEA                                  | Y                | Y                  | O                               | 1,619                                | 10                          | 10   | 100       | 15   | 100       | NL      | 100       | NL                | 100       | 5            | 100       | NL      | 100       | 200        | 100       | NL        | 100       | 100              | 17  |                                  |  | Yes                  |               | 26                                      | 1               |   |
|                           | 100%                        | Alstonville                           | 1986                    | 8,000           | AS                                 | IEA                                  | Y                | Y                  | R                               | 626                                  | 254                         | 10   | 100       | 15   | 76        | 10      | 100       | NL                | 100       | 5            | 100       | 0.5     | 88        | 200        | 100       | NL        | 100       | 76               | 5   |                                  |  | Yes                  |               | 133                                     | 1               |   |
|                           | 100%                        | Wardell                               | 1997                    | 1,750           | AS                                 | IEA                                  | Y                |                    | R                               | 198                                  | 20                          | 15   | 100       | 20   | -         | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | 200        | 100       | NL        | 100       | -                | 0   |                                  |  | Yes                  |               | 26                                      | 1               |   |
|                           | Total/Weighted Average      |                                       | 74,750                  |                 |                                    |                                      |                  | R O                | 5,397                           | 517                                  | 10                          | 100  | 15        | 94   | 10        | 86      | 2         | 100               | 5         | 100          | 0.5       | 99      | 200       | 100        | NL        | 100       | 79        | 32               | 2.3 | 79                               |  | 13                   | 208           | 3                                       |                 |   |
| Balranald Council         | No                          | Balranald                             | 1999                    | 2,000           | S                                  | AN                                   |                  |                    | L                               | 105                                  |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | -             | 0                                       |                 |   |
|                           | No                          | Euston                                | 1995                    | 1,100           | S                                  | AN                                   |                  |                    | L                               | 79                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | -             | 0                                       |                 |   |
|                           | Total/Weighted Average      |                                       | 3,100                   |                 |                                    |                                      |                  |                    | L                               | 184                                  | 0                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                | 0   | 100                              |  | 1                    | 0             | 0                                       |                 |   |
| Bathurst Regional Council |                             | Bathurst                              | 1998                    | 55,000          | T                                  | IEA                                  | Y                | Y                  |                                 | 3,731                                | 3,712                       | 20   | 100       | 25   | 100       | 15      | 100       | NL                | 100       | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   | 0.1                              | 100  | Yes                  | 4             | 52                                      | 0               |   |
| Bega Valley Shire Council | No                          | Wolumla                               | 2007                    | 800             | T                                  | MBR                                  | Y                |                    |                                 | 21                                   | 20                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | 0             | 0                                       |                 |   |
|                           | No                          | Cobargo                               | 2006                    | 800             | T                                  | MBR                                  | Y                |                    | R                               | 22                                   | 18                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | -             | 0                                       |                 |   |
|                           | No                          | Candelo                               | 2007                    | 800             | T                                  | MBR                                  | Y                |                    | R                               | 18                                   | 10                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | -             | 0                                       |                 |   |
|                           | No                          | Kalaru                                | 2008                    | 800             | T                                  | MBR                                  | Y                |                    |                                 | 13                                   | 12                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | 0             | 0                                       |                 |   |
|                           |                             | Tura Beach                            | 2015                    | 4,500           | T                                  | CEA                                  | Y                |                    | L                               | 201                                  | 25                          | 10   | 100       | 20   | 83        | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 83               | 4   |                                  |  | Yes                  |               | 12                                      | 0               |   |
|                           |                             | Eden                                  | 2015                    | 8,000           | T                                  | IEA                                  | Y                |                    | O                               | 361                                  | 64                          | 10   | 100       | 20   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 2       | 100       | NL         | 100       | 100       | 6.5 - 8.5 | 100              | 100 | 4                                |  |                      | Yes           |   | 12              | 0 |
|                           |                             | Tathra                                | 2004                    | 6,200           | T                                  | CEA                                  | Y                | Y                  |                                 | 139                                  | 126                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 1       | 100       | 100        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |   |
|                           |                             | Bega                                  | 2008                    | 8,000           | T                                  | IEA                                  | Y                | Y                  | R                               | 455                                  |                             | 10   | 100       | 10   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |   |
|                           |                             | Bermagui                              | 2008                    | 6,000           | AS                                 | CEA                                  | Y                |                    | O                               | 216                                  | 38                          | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 8       | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 2   |                                  |  | Yes                  |               | 12                                      | 0               |   |
|                           |                             | Merimbula                             | 2008                    | 15,500          | AS                                 | IEA                                  | Y                |                    | L O                             | 798                                  | 133                         | 10   | 100       | 20   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 13      | 100       | 200        | 83        | 6.5 - 8.5 | 100       | 83               | 2   |                                  |  | Yes                  |               | 12                                      | 0               |   |
|                           | Total/Weighted Average      |                                       | 51,400                  |                 |                                    |                                      |                  |                    | L R O                           | 2,244                                | 446                         | 10   | 100       | 20   | 98        | 10      | 100       | 2                 | 100       | 2            | 100       | 13      | 100       | 200        | 94        | 6.5 - 8.5 | 100       | 92               | 13  | 1.1                              | 92   |                      | 5             | 72                                      | 0               |   |
| Bellingen Shire Council   | 100%                        | Urunga                                | 1989                    | 6,650           | T                                  | IEA                                  | Y                | Y                  | R                               | 345                                  |                             | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  |                      |               | 26                                      | 1               |   |
|                           |                             | Bellingen                             | 1994                    | 5,000           | T                                  | IEA                                  | Y                | Y                  | R                               | 322                                  |                             | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  |                      |               | 26                                      | 1               |   |
|                           |                             | Dorrigo                               | 1970                    | 1,500           | T                                  | TF                                   |                  |                    | R                               | 97                                   |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 2                |     |                                  |  |                      | 26            | 0                                       |                 |   |
|                           |                             | Total/Weighted Average                |                         | 13,150          |                                    |                                      |                  |                    | R                               | 764                                  | 0                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 2   | 0.7                              | 100  |                      | 4             | 78                                      | 2               |   |
| Berrigan Shire Council    | No                          | Tocumwal                              | 1944                    | 4,000           | T                                  | TF                                   |                  |                    | L                               | 275                                  | 270                         | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 5                |     |                                  |  |                      | 2             | 0                                       |                 |   |
|                           | No                          | Finley                                | 1967                    | 3,200           | T                                  | TF                                   |                  |                    | L                               | 274                                  | 225                         | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 10               |     |                                  |  |                      | 2             | 5                                       |                 |   |
|                           | No                          | Barooga                               | 1989                    | 3,000           | S                                  | A                                    |                  |                    | L                               | 105                                  |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 0                |     |                                  |  |                      | 2             | 0                                       |                 |   |
|                           | No                          | Berrigan                              | 1968                    | 1,500           | T                                  | TF                                   |                  |                    | L                               | 96                                   | 95                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 3                |     |                                  | </   |                      |               |   |                 |   |

APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |       | Odour Complaints |                | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |     |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |         |     |     |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH    |                  | Overall Result |                                  |  |                      |               |   | No. | No./ 1000 props |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |         |     |     |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range | % Samples        | % Samples      |                                  |  |                      |               |   |     |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |         |     |     |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |       |                  |                |                                  |  |                      |               |   |     |                 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 70 | 71 | 72 | 68 | 69 | E4 % 63 | 64a | 64b | 65 | 67 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |       |                  |                |                                  |  |                      |               |   |     |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |         |     |     |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility                   | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           | Odour Complaints |     | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |                 |
|---------------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|-----------|------------------|-----|----------------------------------|--|----------------------|---------------|---|-----------------|
|                                 |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |           | Overall Result   | No. |                                  |  |                      |               |   | No./ 1000 props |
|                                 |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples |                  |     |                                  |  |                      |               |   |                 |
|                                 |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70        | 71        | 72               | 68  | 69                               | E4 % 63  | 64a                  | 64b           | 65                                      | 67              |
| Dubbo City Council              | No 100%                     | Wongarbon                             | 2010                    | 526             | nil                                | A                                    |                  |                    |                                 | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |
|                                 |                             | Dubbo (Troy Junction)                 | 2004                    | 40,000          | AS                                 | CEA                                  | Y                |                    | R                               | 2,766                                | 2,183                       | 30   | 100       | 30   | 100       | 15      | 100       | 5                 | -         | 10           | 100       | 10      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 |                             | Total/Weighted Average                |                         | 40,526          |                                    |                                      |                  |                    | R                               | 2,766                                | 2,183                       | 30   | 100       | 30   | 100       | 15      | 100       | 5                 |           | 10           | 100       | 10      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   | 0.1                              | 100  |                      | 4             | 12                                      | 0               |
| Eurobodalla Shire Council       | 100%                        | Batemans Bay                          | 2012                    | 21,000          | T                                  | CEA                                  | Y                |                    | O                               | 1,794                                | 105                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | 100%                        | Narooma                               | 1984                    | 8,000           | T                                  | CEA                                  | Y                |                    | O                               | 610                                  | 4                           | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | 100%                        | Moruya                                | 2014                    | 8,000           | T                                  | CEA                                  | Y                | Y                  | R                               | 358                                  | 49                          | 20   | 100       | 30   | 100       | 15      | 100       | NL                | 100       | 10           | 100       | 1       | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | 100%                        | Tomakin                               | 1984                    | 8,000           | T                                  | CEA                                  | Y                |                    | O                               | 537                                  | 70                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | 100%                        | Tuross Heads                          | 1984                    | 4,000           | T                                  | IEA                                  |                  |                    | L                               | 177                                  | 16                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 |                             | Total/Weighted Average                |                         | 49,000          |                                    |                                      |                  |                    | L R O                           | 3,477                                | 243                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 1   | 0.1                              | 100  |                      | 7             | 60                                      | 0               |
| Forbes Shire Council            |                             | Forbes                                | 2005                    | 12,000          | T                                  | IEA                                  | Y                | Y                  | L R                             | 602                                  | 9                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 10           | 100       | 0.3     | 100       | 200        | 100       | 6.8 - 8.5 | 100       | 100              | 4   | 1.3                              | 100  | Yes                  | 1             | 12                                      | 0               |
| Gilgandra Shire Council         | No                          | Gilgandra                             | 2009                    | 3,000           | AT                                 | TF                                   |                  |                    |                                 | 238                                  | 238                         | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   | 0                                | 100  | Yes                  | 4             | 4                                       | 0               |
|                                 | No                          | Deepwater                             | 1987                    | 500             | S                                  | AN                                   |                  |                    | R                               | 20                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 12                                      | 0               |
| Glen Innes Severn Shire Council |                             | Glen Innes                            | 2007                    | 8,000           | AT                                 | IEA                                  | Y                | Y                  | R                               | 506                                  |                             | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                 |                             | Total/Weighted Average                |                         | 8,500           |                                    |                                      |                  |                    | R                               | 526                                  | 0                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   | 0.0                              | 100  |                      | 3             | 38                                      | 0               |
| Gosford City Council            | No                          | Kincumber                             | 1983                    | 180,000         | AS                                 | C                                    |                  |                    | O                               | 13,632                               | 13                          | 30   | 100       | 50   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 132 |                                  |  | Yes                  |               | 61                                      | 2               |
|                                 |                             | Woy Woy                               | 1989                    | 50,000          | AS                                 | CEA                                  |                  |                    | O                               | 5,792                                | 6                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 15  |                                  |  |                      |               | 61                                      | 1               |
|                                 |                             | Total/Weighted Average                |                         | 230,000         |                                    |                                      |                  |                    | O                               | 19,424                               | 19                          | 30   | 100       | 50   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 147 | 2.1                              | 100  |                      | 6             | 122                                     | 3               |
| Goulburn Mulwaree Council       | 100%                        | Goulburn                              | 2007                    | 30,000          | T                                  | TF                                   |                  | Y                  | R                               | 1,933                                | 1,806                       | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 8   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | No                          | Marulan                               | 1990                    | 1,100           | O                                  | A                                    |                  |                    |                                 | 0                                    |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 0                                       | 0               |
|                                 |                             | Total/Weighted Average                |                         | 31,100          |                                    |                                      |                  |                    | R                               | 1,933                                | 1,806                       | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 8   | 0.7                              | 100  |                      | 5             | 12                                      | 0               |
| Greater Hume Shire Council      | 100%                        | Holbrook                              | 1969                    | 1,600           | T                                  | TF                                   |                  |                    | R                               | 128                                  | 13                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 4                                       | 0               |
|                                 | No                          | Jindera                               | 2005                    | 1,200           | T                                  | A                                    |                  |                    |                                 | 88                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |
|                                 | 100%                        | Henty                                 | 1971                    | 1,000           | T                                  | IEA                                  | Y                |                    | L                               | 62                                   | 26                          | 20   | 100       | 30   | 100       | 20      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 4                                       | 0               |
|                                 | 100%                        | Culcairn                              | 1996                    | 1,200           | T                                  | IEA                                  | Y                |                    | L                               | 85                                   | 14                          | 20   | 100       | 30   | 100       | 20      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 4                                       | 0               |
|                                 | 100%                        | Walla Walla                           | 1981                    | 1,000           | T                                  | IEA                                  | Y                |                    | R                               | 41                                   | 9                           | 20   | 100       | 30   | 100       | 20      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 4                                       | 0               |
|                                 | No                          | Burrumbuttock                         | 1990                    | 100             | T                                  | CED                                  |                  |                    | L                               | 2                                    |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |
|                                 |                             | Total/Weighted Average                |                         | 6,100           |                                    |                                      |                  |                    | L R                             | 406                                  | 61                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   | 0.0                              | 100  |                      | 5             | 16                                      | 0               |
| Griffith City Council           | 100%                        | Griffith                              | 2012                    | 37,500          | AT                                 | MBR                                  | Y                | Y                  | L R                             | 2,007                                | 158                         | 10   | 100       | 15   | 100       | NL      | 100       | NL                | 100       | 2            | 100       | NL      | 100       | 200        | 100       | NL        | 100       | 100              | 5   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 | 100%                        | Yenda                                 | 1981                    | 34,000          | S                                  | AL                                   |                  |                    | R                               | 74                                   |                             | 50   | 100       | 50   | 57        | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | 600        | 57        | 5.5 - 9.5 | 100       | 57               | 0   |                                  |  | Yes                  |               | 6                                       | 0               |
|                                 | No                          | Bilbul                                | 1990                    | 310             | P                                  | A                                    |                  |                    | L                               | 9                                    |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 0                                       | 0               |
|                                 |                             | Total/Weighted Average                |                         | 71,810          |                                    |                                      |                  |                    | L R                             | 2,090                                | 158                         | 10   | 100       | 15   | 98        | NL      | 100       | NL                | 100       | 2            | 100       | NL      | 100       | 200        | 98        | NL        | 100       | 98               | 5   | 0.7                              | 98   |                      | 3             | 18                                      | 0               |
| Gundagai Shire Council          | No                          | Gundagai                              | 1932                    | 3,500           | S                                  | TF                                   |                  |                    |                                 | -                                    | 234                         | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   | -                                | 100  | Yes                  | 4             | 10                                      | -               |
| Gunnedah Shire Council          | No                          | Gunnedah                              | 1969                    | 11,000          | S                                  | TF                                   |                  |                    | L                               | 603                                  | 603                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 2   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                 |                             | Curlewis                              | 1990                    | 1,650           | nil                                | A                                    |                  |                    |                                 | 28                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 2   |                                  |  |                      |               | 12                                      | 0               |
|                                 |                             | Total/Weighted Average                |                         | 12,650          |                                    |                                      |                  |                    | L                               | 631                                  | 603                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 4   | 1.0                              | 100  |                      | 2             |   |                 |



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility                  | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           | Odour Complaints |     | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |                 |
|--------------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|-----------|------------------|-----|----------------------------------|--|----------------------|---------------|---|-----------------|
|                                |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |           | Overall Result   | No. |                                  |  |                      |               |   | No./ 1000 props |
|                                |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples | % Samples        | 68  |                                  |  |                      |               |   | 69              |
|                                |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70        | 71        | 72               | 68  | 69                               | 63   | 64a                  | 64b           | 65                                      | 67              |
| Inverell Shire Council         | No                          | Inverell                              | 1986                    | 12,000          | AS                                 | IEA                                  |                  |                    | R                               | 680                                  |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 14                                      | 0               |
|                                |                             | Ashford                               | 1970                    | 1,000           | AS                                 | IEA                                  |                  |                    | R                               | 35                                   |                             | 20   | 100       | 30   | 80        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 80        | 80               | -   |                                  |  | Yes                  |               | 14                                      | -               |
|                                |                             | Delungra                              | 1970                    | 500             | AS                                 | IEA                                  |                  |                    | R                               | 20                                   |                             | 20   | 100       | 30   | 80        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | -         | 80               | 0   |                                  |  | Yes                  |               | 14                                      | 0               |
|                                |                             | Gilgai                                | 1980                    | 500             | S                                  | A                                    |                  |                    | R                               | 30                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |
|                                |                             | Total/Weighted Average                |                         | 14,000          |                                    |                                      |                  |                    | R                               | 765                                  | 0                           | 20   | 100       | 30   | 99        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 96        | 99               | 0   | 0.0                              | 99   |                      | 4             | 42                                      | 0               |
| Jerilderie Shire Council       | 100%                        | Jerilderie                            | 1996                    | 2,000           | S                                  | A                                    |                  |                    |                                 | 77                                   | 50                          | 20   | 50        | 30   | 0         | NL      | 100       | NL                | 100       | 10           | 50        | NL      | 100       | NL         | 100       | NL        | 100       | 0                | 0   | 0.0                              | 0  | Yes                  | 2             | 4                                       | 0               |
| Junee Shire Council            | 100%                        | Junee                                 | 1992                    | 7,000           | T                                  | TF                                   |                  |                    | R                               | 367                                  | 147                         | 30   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | 600        | 100       | 5.5 - 9.5 | 50        | 50               | 0   | 0.0                              | 50   |                      | 2             | 4                                       | 0               |
| Kempsey Shire Council          | 100%                        | Kempsey West                          | 2011                    | 12,000          | T                                  | TF                                   |                  | Y                  | R                               | 1,169                                | 14                          | 15   | 100       | 20   | 50        | 15      | 81        | 5                 | 77        | 10           | 100       | 1       | 100       | 600        | 88        | 6.5 - 8.5 | 88        | 50               | 5   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                |                             | South West Rocks                      | 2010                    | 12,000          | AT                                 | IEA                                  | Y                | Y                  | L                               | 496                                  | 3                           | 10   | 100       | 15   | 100       | 10      | 100       | 3                 | 100       | 2            | 100       | 3       | 83        | 200        | 100       | 6.5 - 8.5 | 100       | 83               | 2   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Kempsey South                         | 2014                    | 5,400           | T                                  | TF                                   |                  |                    | R                               | 474                                  | 39                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 3   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                |                             | Crescent Head                         | 2012                    | 4,000           | T                                  | IEA                                  | Y                | Y                  | O                               | 143                                  | 5                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                |                             | Smithtown/Gladstone                   | 1983                    | 2,000           | T                                  | IEA                                  |                  |                    | R                               | 159                                  |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Frederickton                          | 1980                    | 1,000           | T                                  | IEA                                  |                  |                    | R                               | 76                                   | 15                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Hat Head                              | 2011                    | 2,500           | T                                  | IEA                                  | Y                | Y                  | L                               | 40                                   | 0                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                |                             | Total/Weighted Average                |                         | 38,900          |                                    |                                      |                  |                    | L R O                           | 2,558                                | 77                          | 15   | 100       | 20   | 77        | 15      | 91        | 5                 | 89        | 10           | 100       | 1       | 97        | 600        | 95        | 6.5 - 8.5 | 95        | 74               | 11  | 1.1                              | 74   |                      | 8             | 140                                     | 0               |
| Kyogle Council                 | Reuse                       | Kyogle                                | 2010                    | 3,200           | AS                                 | TF                                   | Y                | Y                  | R                               | 341                                  | 25                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 1   |                                  |  |                      |               | 12                                      | 0               |
|                                | 100%                        | Bonalbo                               | 2002                    | 500             | AS                                 | IEA                                  | Y                |                    | R                               | 36                                   | 33                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 12                                      | 0               |
|                                | 100%                        | Woodenbong                            | 2007                    | 662             | AS                                 | IEA                                  | Y                |                    | R                               | 47                                   | 22                          | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 1   |                                  |  |                      |               | 12                                      | 0               |
|                                |                             | Total/Weighted Average                |                         | 4,362           |                                    |                                      |                  |                    | R                               | 424                                  | 80                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 2   | 1.2                              | 100  |                      | 7             | 36                                      | 0               |
| Lachlan Shire Council          | No                          | Condobolin                            | 1982                    | 4,000           | AS                                 | TF                                   |                  |                    |                                 | -                                    | -                           | 20   | -         | 30   | -         | 40      | -         | NL                | 100       | 10           | -         | 10      | -         | 1500       | -         | 6.5 - 8.5 | -         | -                | -   |                                  |  | Yes                  |               | 12                                      | -               |
|                                |                             | Tottenham                             |                         | -               | 0                                  | 0                                    |                  |                    |                                 | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   |                                  |  |                      |               | -                                       | -               |
|                                |                             | Lake Cargelligo                       |                         | -               | 0                                  | 0                                    |                  |                    |                                 | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   |                                  |  |                      |               | -                                       | -               |
|                                |                             | Total/Weighted Average                |                         | 4,000           |                                    |                                      |                  |                    |                                 | 0                                    | 116                         |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |           | 0         | 0                | 0.0 | 0                                |  |                      | 1             | 12                                      | 0               |
| Leeton Shire Council           | No                          | Leeton                                | 1999                    | 27,000          | T                                  | TF                                   |                  | Y                  | L                               | 742                                  | -                           | 70   | 100       | 70   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 5.5 - 9.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 6                                       | 0               |
|                                |                             | Yanco                                 | 1980                    | 1,000           | T                                  | IEA                                  |                  |                    | L R                             | 69                                   | -                           | 30   | 100       | 40   | 100       | NL      | 100       | NL                | 100       | 15           | 100       | NL      | 100       | 600        | 100       | 5.5 - 9.5 | 100       | 100              | 0   |                                  |  |                      |               | 4                                       | 0               |
|                                |                             | Whitton                               | 2000                    | 500             | S                                  | A                                    |                  |                    |                                 | 20                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |
|                                |                             | Total/Weighted Average                |                         | 28,500          |                                    |                                      |                  |                    | L R                             | 831                                  | 0                           | 70   | 100       | 70   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 5.5 - 9.5 | 100       | 100              | 0   | 0.0                              | 100  |                      | 3             | 10                                      | 0               |
| Lismore City Council           | 100%                        | Lismore East                          | 2004                    | 30,500          | AT                                 | IEA                                  | Y                | Y                  | R                               | 2,284                                | 5                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 76        | NL         | 100       | 6.5 - 8.5 | 100       | 76               | 0   |                                  |  | Yes                  |               | 52                                      | 0               |
|                                |                             | Lismore South                         | 2004                    | 22,000          | T                                  | TF                                   | Y                | Y                  | R                               | 1,549                                |                             | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 55        | NL         | 100       | NL        | 100       | 55               | 0   |                                  |  | Yes                  |               | 52                                      | 0               |
|                                |                             | Nimbin                                | 1993                    | 600             | T                                  | IEA                                  | Y                | Y                  | R                               | 87                                   |                             | 20   | 100       | 30   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Total/Weighted Average                |                         | 53,100          |                                    |                                      |                  |                    | R                               | 3,920                                | 5                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 68        | NL         | 100       | 6.5 - 8.5 | 100       | 68               | 0   | 0.0                              | 68   |                      | 4             | 116                                     | 0               |
| Lithgow City Council           | 100%                        | Lithgow                               | 2012                    | 23,000          | T                                  | IEA                                  | Y                | Y                  | R                               | 1,780                                |                             | 10   | 100       | 15   | 83        | 10      | 100       | 2                 | 100       | 10           | 100       | 0.5     | 83        | 200        | 100       | 6.5 - 8.5 | 100       | 83               | 5   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Portland                              | 1990                    | 2,300           | S                                  | TF                                   |                  |                    | R                               | 218                                  |                             | 30   | 100       | 50   | 100       | 35      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | 600        | 66        | 6.5 - 8.5 | 100       | 66               | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Wallerawang                           | 2012                    | 3,300           | T                                  | IEA                                  | Y                | Y                  | R                               | 144                                  |                             | 10   | 100       | 15   | 100       | 10      | 83        | 2                 | 75        | 10           | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 75               | 0   |                                  |  | Yes                  |               | 12                                      | 0               |
|                                |                             | Total/Weighted Average                |                         | 28,600          |                                    |                                      |                  |                    | R                               | 2,142                                | 0                           | 10   | 100       | 15   | 86        | 10      | 99        | 2                 | 98        | 10           | 100       | 0.5     | 86        | 200        | 97        | 6.5 - 8.5 | 100       | 81               | 5   | 0.7                              | 81   |                      | 6             | 36                                      | 0               |
| Liverpool Plains Shire Council |                             | Quirindi                              | 1984                    | 7,000           | AS                                 | TF                                   |                  |                    | R                               | 145                                  |                             | 20   | 100       | 30   | 35        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 35               | 0   |                                  |  | Yes                  |               | 27                                      | 0               |
|                                |                             | Werris Creek                          | 1969                    | 3,200           | AS                                 | TF                                   |                  |                    | R                               | 122                                  |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 81        | NL      | 100       | NL         | 100       | NL        | 100       | 81               | 0   |                                  |  | Yes                  |               | 26                                      | 0               |
|                                |                             | Total/Weighted Average                |                         | 10,200          |                                    |                                      |                  |                    | R                               | 267                                  | 0                           | 20   | 100       | 30   | 65        | NL      | 100       | NL                | 100       | 10           | 91        | NL      | 100       | NL         | 100       | NL        | 100       | 56               | 0   | 0.0                              | 56   |                      | 3             | 53                                      | 0               |
| Lockhart Shire Council         | No                          | Lockhart                              | 1967                    | 3,000           | T                                  | TF                                   |                  |                    | L                               | 74                                   | 2                           | 20   | 100       | 30   | 75        | NL      |           |                   |           |              |           |         |           |            |           |           |           |                  |     |                                  |  |                      |               |   |                 |

APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility                | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           | Odour Complaints |     | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |                 |         |
|------------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|-----------|------------------|-----|----------------------------------|--|----------------------|---------------|---|-----------------|---------|
|                              |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |           | Overall Result   | No. |                                  |  |                      |               |   | No./ 1000 props |         |
|                              |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples | % Samples        | 68  |                                  |  |                      |               |   | 69              | E4 % 63 |
| MidCoast County Council      | 100%                        | Gloucester                            | 1985                    | 4,600           | S                                  | TF                                   | Y                |                    | R                               | 345                                  | -                           | 20   | 100       | 30   | 100       | 35      | 100       | 10                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 3   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             | Dawson River                          | 1999                    | 30,000          | T                                  | CEA                                  | Y                |                    | R                               | 1,819                                | 286                         | 30   | 100       | 30   | 100       | NL      | 100       | 5                 | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 13  |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             | Tea Gardens                           | 1997                    | 14,000          | AT                                 | IEA                                  | Y                | Y                  | L                               | 369                                  | 87                          | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 5            | 100       | 1       | 69        | 10         | 85        | 6.5 - 8.5 | 100       | 69               | 2   |                                  |  | Yes                  |               | 26                                      | 1               |         |
|                              | 100%                        | Forster                               | 1996                    | 32,000          | AT                                 | IEA                                  | Y                | Y                  | O                               | 1,681                                | 26                          | 20   | 100       | 35   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 15  |                                  |  | Yes                  |               | 52                                      | 0               |         |
|                              |                             | Harrington                            | 1994                    | 8,000           | AS                                 | CEA                                  | Y                |                    | L                               | 450                                  | 3                           | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             | Wingham                               | 2008                    | 7,500           | AS                                 | CEA                                  | Y                |                    | R                               | 403                                  | 89                          | 30   | 100       | 30   | 100       | NL      | 100       | 10                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 26                                      | 0               |         |
|                              | 100%                        | Old Bar                               | 2004                    | 7,000           | T                                  | CEA                                  | Y                | Y                  | L                               | 356                                  |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 5               |         |
|                              |                             | Hallidays Point                       | 2007                    | 25,000          | T                                  | CEA                                  | Y                | Y                  | L                               | 1,170                                | 377                         | 30   | 100       | 20   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 10  |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              | 100%                        | Bulahdelah                            | 1996                    | 3,000           | AT                                 | IEA                                  | Y                | Y                  | R                               | 124                                  | 12                          | 10   | 100       | 15   | 100       | 10      | -         | 1                 | 100       | 10           | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             | Stroud                                | 2010                    | 1,500           | T                                  | CEA                                  | Y                | Y                  | R                               | 56                                   | 41                          | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 7            | 100       | 4       | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 2               |         |
|                              |                             | Manning Point                         | 2003                    | 600             | T                                  | IEA                                  | Y                | Y                  | L                               | 21                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 0                                       | 0               |         |
|                              | 100%                        | Lansdowne                             | 2002                    | 600             | AS                                 | IEA                                  | Y                |                    | R                               | 27                                   | 9                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 3                                       | 0               |         |
|                              |                             | Cooperbrook                           | 2002                    | 600             | AS                                 | IEA                                  | Y                |                    | R                               | 28                                   | 12                          | 30   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | 200        | 50        | 6.5 - 8.5 | 50        | 50               | 0   |                                  |  | Yes                  |               | 2                                       | 0               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 134,400                            |                                      |                  |                    | L R O                           | 6,849                                | 941                         | 30   | 100       | 30   | 100       | NL      | 98        | 5                 | 100       | NL           | 100       | NL      | 98        | NL         | 99        | 6.5 - 8.5 | 100       | 98               | 45  | 1.3                              | 98   |                      | 16            | 193                                     | 8               |         |
| Mid-Western Regional Council | 100%                        | Mudgee (New)                          | 2014                    | 16,000          | AT                                 | IEA                                  | Y                | Y                  | R                               | 982                                  | 2                           | 10   | 100       | 10   | 100       | 10      | 100       | NL                | 100       | 2            | 100       | 0.5     | 50        | 200        | 42        | 6.5 - 8.5 | 100       | 42               | 5   |                                  |  |                      |               | 12                                      | 0               |         |
|                              |                             | Gulgong                               | 1997                    | 3,500           | AS                                 | IEA                                  | Y                |                    | L                               | 119                                  |                             | 20   | 100       | 50   | 100       | 40      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | 600        | 75        | 6.5 - 8.5 | 0         | 0                | 2   |                                  |  | Yes                  |               | 4                                       | 0               |         |
|                              |                             | Kandos                                | 1972                    | 2,800           | T                                  | TF                                   |                  |                    | R                               | 68                                   |                             | 30   | 100       | 50   | 100       | 35      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | 6.5 - 8.5 | 42        | 42               | 1   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              | 100%                        | Rylstone                              | 1972                    | 1,300           | T                                  | TF                                   | Y                | Y                  | R                               | 50                                   |                             | 30   | 100       | 50   | 100       | 35      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 23,600                             |                                      |                  |                    |                                 | L R                                  | 1,219                       | 2  | 10        | 100  | 10        | 100     | 10        | 100               | NL        | 100          | 2         | 100     | 0.5       | 60         | 200       | 51        | 6.5 - 8.5 | 87               | 40  | 8                                | 1.1  | 40                   |               | 8                                       | 40              | 0       |
| Moree Plains Shire Council   | No                          | Ashley                                | 2005                    | 400             | nil                                | A                                    |                  |                    | L                               | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |         |
|                              |                             | Boggabilla                            | 2008                    | 1,106           | P                                  | A                                    |                  |                    | L                               | 20                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   |                                  |  |                      |               | -                                       | 0               |         |
|                              |                             | Moree                                 | 2006                    | 15,000          | AS                                 | IEA                                  |                  |                    | L                               | 1,281                                | 793                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  |                      |               | 4                                       | 0               |         |
|                              | No                          | Mungindi                              | 1998                    | 1,400           | AS                                 | IEA                                  |                  |                    | L                               | 56                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 17,906                             |                                      |                  |                    |                                 | L                                    | 1,357                       | 793  | 20        | 100  | 30        | 100     | NL        | 100               | NL        | 100          | 10        | 100     | NL        | 100        | NL        | 100       | 6.5 - 8.5 | 100              | 100 | 0                                | 0.0  | 100                  |               | 4                                       | 4               | 0       |
| Murray Shire Council         | No                          | Moama                                 | 1997                    | 10,000          | T                                  | A                                    |                  |                    | L                               | 528                                  | 90                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |         |
|                              |                             | Mathoura                              | 1997                    | 1,600           | T                                  | A                                    |                  |                    | L                               | 44                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 2                                       | 0               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 11,600                             |                                      |                  |                    |                                 | L                                    | 572                         | 90   | NL        | 100  | NL        | 100     | NL        | 100               | NL        | 100          | NL        | 100     | NL        | 100        | NL        | 100       | NL        | 100              | 100 | 0                                | 0.0  | 100                  |               | 6                                       | 14              | 0       |
| Murrumbidgee Shire Council   | 100%                        | Darlington Point                      | 2009                    | 1,500           | T                                  | CEA                                  | Y                |                    | -                               | -                                    | -                           | 10   | -         | 15   | -         | 10      | -         | NL                | 100       | 100          | 10        | -       | 200       | -          | 6.5 - 8.5 | -         | -         | -                | -   |                                  |  | Yes                  |               | 90                                      | -               |         |
|                              |                             | Coleambally                           | 2010                    | 600             | P                                  | A                                    |                  |                    | -                               | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   |                                  |  |                      |               | -                                       | -               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 2,100                              |                                      |                  |                    |                                 | 0                                    | 27                          |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |           | 0         | 0                | 0.0 | 0                                |  | 2                    | 90            | 0                                       |                 |         |
| Muswellbrook Shire Council   | 100%                        | Muswellbrook                          | 2013                    | 14,000          | T                                  | TF                                   |                  |                    |                                 | 845                                  | 784                         | 20   | 83        | 30   | 70        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 50        | 50               | 2   |                                  |  |                      |               | 20                                      | 0               |         |
|                              |                             | Denman                                |                         | 1,500           | T                                  | IEA                                  |                  |                    |                                 | 116                                  | 108                         | 20   | 100       | 30   | 26        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | 6.5 - 8.5 | 47        | 26               | 0   |                                  |  |                      |               | 12                                      | 0               |         |
|                              |                             |                                       | Total/Weighted Average  |                 | 15,500                             |                                      |                  |                    |                                 |                                      | 961                         | 892  | 20        | 85   | 30        | 65      | NL        | 100               | NL        | 100          | 10        | 100     | NL        | 100        | NL        | 100       | 6.5 - 8.5 | 50               | 47  | 2                                | 0.3  | 47                   |               | 3                                       | 32              | 0       |
| Nambucca Shire Council       | 100%                        | Nambucca Heads                        | 2012                    | 15,000          | T                                  | IEA                                  |                  | Y                  | R                               | 675                                  |                             | 10   | 100       | 15   | 100       | 10      | 100       | NL                | 100       | 5            | 100       | 0.5     | 56        | 200        | 81        | NL        | 100       | 100              | 56  | 5                                |  |                      | Yes           |   | 27              | 0       |
|                              |                             | Macksville                            | 1998                    | 5,500           | T                                  | IEA                                  |                  | Y                  | O                               | 536                                  |                             | 10   | 88        | 20   | 77        | 10      | 85        | 2                 | 85        | 5            | 100       | 0.5     | 88        | 200        | 88        | 6.5 - 8.5 | 100       | 77               | 2   |                                  |  | Yes                  |               | 26                                      | 0               |         |
|                              |                             | Scotts Head                           | 1985                    | 2,000           | S                                  | IEA                                  |                  |                    | L                               | 148                                  |                             | 20   | 100       |      |           |         |           |                   |           |              |           |         |           |            |           |           |           |                  |     |                                  |  |                      |               |   |                 |         |



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility             | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           | Odour Complaints |     | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |                 |      |
|---------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|-----------|------------------|-----|----------------------------------|--|----------------------|---------------|---|-----------------|------|
|                           |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |           | Overall Result   | No. |                                  |  |                      |               |   | No./ 1000 props |      |
|                           |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples | % Samples        | 68  |                                  |  |                      |               |   | 69              | E4 % |
|                           |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70        | 71        | 72               |     |                                  | 63   |                      |               |   |                 |      |
| Palerang Council          | 100%                        | Braidwood                             | 2010                    | 2,000           | AT                                 | IEA                                  | Y                | Y                  | R                               | 113                                  | 15                          | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 84        | 200        | 100       | 6.5 - 8.5 | 100       | 84               | 0   |                                  |  | Yes                  |               | 13                                      | 0               |      |
|                           | 100%                        | Bungendore                            | 2012                    | 5,000           | AT                                 | IEA                                  | Y                | Y                  | R                               | 214                                  | 70                          | 10   | 100       | 15   | 100       | 10      | 100       | 10                | 100       | 10           | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 2   |                                  |  | Yes                  |               | 13                                      | 0               |      |
|                           |                             | Captains Flat                         | 1984                    | 500             | T                                  | IEA                                  | Y                |                    | R                               | 46                                   |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 4                                       | 0               |      |
|                           |                             | Total/Weighted Average                |                         | 7,500           |                                    |                                      |                  |                    | R                               | 373                                  | 85                          | 10   | 100       | 15   | 100       | 10      | 100       | 10                | 100       | 10           | 100       | 0.5     | 95        | 200        | 100       | 6.5 - 8.5 | 100       | 95               | 2   | 0.9                              | 95   |                      | 6             | 30                                      | 0               |      |
| Parkes Shire Council      | 100%                        | Parkes                                | 1996                    | 14,500          | AS                                 | TF                                   |                  | Y                  | R                               | 716                                  | 170                         | 30   | 100       | 50   | 100       | 40      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | 6.5 - 8.5 | 57        | 57               | 0   |                                  |  | Yes                  |               | 7                                       | 0               |      |
|                           | No                          | Tullamore                             | 2009                    | 370             | S                                  | A                                    |                  |                    | L                               | 0                                    | 2                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |      |
|                           | No                          | Trundle                               | 2011                    | 670             | S                                  | A                                    |                  |                    |                                 | 0                                    |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |      |
|                           | No                          | Peak Hill                             | 1983                    | 2,000           | AS                                 | TF                                   |                  |                    | L                               | 110                                  | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | 0                                       | 0               |      |
| Queanbeyan City Council   | No                          | Queanbeyan                            | 1986                    | 34,500          | AS                                 | TF                                   | Y                | Y                  | L R                             | 3,675                                | 0                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   | 0.0                              | 63   |                      | 3             | 7                                       | 0               |      |
| Richmond Valley Council   | 100%                        | Casino                                | 1986                    | 13,300          | T                                  | TF                                   | Y                |                    | R                               | 1,110                                | 410                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | -   |                                  |  | Yes                  |               | 26                                      | -               |      |
|                           | 100%                        | Evans Head                            | 2013                    | 5,500           | T                                  | IEA                                  | Y                | Y                  | R                               | 579                                  | -                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | -   |                                  |  | Yes                  |               | 26                                      | -               |      |
|                           |                             | Coraki                                | 2011                    | 1,200           | T                                  | TF                                   |                  |                    | R                               | 125                                  | 10                          | 20   | 100       | 30   | 77        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 77               | -   |                                  |  | Yes                  |               | 13                                      | 0               |      |
|                           |                             | Rileys Hill                           | 1999                    | 200             | T                                  | CEA                                  | Y                | Y                  | R                               | 7                                    | -                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | -   |                                  |  | Yes                  |               | 13                                      | -               |      |
|                           |                             | Total/Weighted Average                |                         | 20,200          |                                    |                                      |                  |                    | R                               | 1,821                                | 420                         | 20   | 100       | 30   | 98        | NL      | 100       | NL                | 100       | 10           | 100       | 10      | 100       | NL         | 100       | NL        | 100       | 98               | 0   | 0.0                              | 98   |                      | 4             | 78                                      | 0               |      |
| Shoalhaven City Council   | 100%                        | Bendalong                             | 2008                    | 4,600           | AS                                 | IEA                                  | Y                | Y                  | L                               | 86                                   |                             | 10   | 100       | 20   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 10      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  |                      |               | 12                                      | 0               |      |
|                           |                             | Nowra                                 | 1989                    | 21,000          | AS                                 | TF                                   | Y                |                    | R                               | 2,199                                | 32                          | 40   | 100       | 40   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | St Georges Basin                      | 1990                    | 8,000           | AS                                 | IEA                                  | Y                |                    | O                               | 1,305                                | 708                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           | 100%                        | Vincentia                             | 2010                    | 14,000          | AS                                 | IEA                                  | Y                | Y                  | O                               | 561                                  | 309                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Bomaderry                             | 1990                    | 12,500          | AS                                 | TF                                   | Y                |                    | R                               | 849                                  |                             | 20   | 100       | 40   | 42        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 42               | 2   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Milton Ulladulla                      | 2006                    | 28,000          | AS                                 | IEA                                  | Y                |                    | O                               | 1,312                                |                             | 15   | 100       | 20   | 100       | NL      | 100       | NL                | 100       | 2            | 100       | NL      | 100       | 200        | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           | 100%                        | Culburra                              | 2005                    | 10,500          | AS                                 | IEA                                  | Y                |                    | O                               | 597                                  | 328                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Sussex Inlet                          | 1990                    | 8,000           | AS                                 | IEA                                  | Y                |                    | L                               | 511                                  | 6                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Callala                               | 2000                    | 6,000           | AS                                 | IEA                                  | Y                | Y                  | O                               | 291                                  | 160                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           | 100%                        | Conjola                               | 2008                    | 2,700           | AS                                 | IEA                                  | Y                | Y                  | L                               | 84                                   |                             | 10   | 100       | 20   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 10      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Shoalhaven Heads                      | 2012                    | 8,000           | AS                                 | IEA                                  | Y                | Y                  | L                               | 233                                  | 106                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | NL      | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 1   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Berry                                 | 2006                    | 3,000           | AS                                 | IEA                                  | Y                | Y                  | R                               | 230                                  | 20                          | 10   | 100       | 10   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Kangaroo Valley                       | 2013                    | 1,410           | AS                                 | MBR                                  | Y                | Y                  |                                 | 40                                   | 36                          | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 1       | 100       | 200        | 100       | NL        | 100       | 100              | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             |                                       | Total/Weighted Average  |                 | 127,710                            |                                      |                  |                    |                                 | L R O                                | 8,298                       | 1,705  | 40        | 100  | 40        | 94      | NL        | 100               | NL        | 100          | 10        | 100     | NL        | 100        | NL        | 100       | NL        | 100              | 94  | 6                                | 0.1  | 94                   |               | 7                                       | 156             | 0    |
| Singleton Council         |                             | Singleton                             | 1988                    | 2,000           | AS                                 | IEA                                  | Y                | Y                  | R                               | 1,126                                | 0                           | 30   | 100       | 30   | 100       | 25      | 100       | NL                | 100       | 15           | 100       | 15      | 100       | NL         | 100       | 6.5 - 8.5 | 100       | 100              | 5   | 0.9                              | 100  | Yes                  | 3             | 12                                      | 0               |      |
| Snowy River Shire Council | 100%<br>No                  | Jindabyne                             | 2012                    | 8,000           | AT                                 | IEA                                  | Y                | Y                  | R                               | 336                                  | -                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 77        | 200        | 88        | 6.5 - 8.5 | 100       | 77               | 0   |                                  |  | Yes                  |               | 18                                      | 0               |      |
|                           |                             | Berridale                             | 2011                    | 2,000           | AS                                 | IEA                                  |                  |                    | L R                             | 142                                  | 39                          | 10   | 100       | 15   | 100       | 10      | 100       | 1                 | 100       | 2            | 100       | 9       | 100       | 100        | 88        | 6.5 - 8.5 | 100       | 88               | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Adaminaby                             | 1961                    | 750             | T                                  | TF                                   | Y                |                    |                                 | 28                                   | -                           | 20   | 100       | 30   | 83        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 83               | 0   |                                  |  | Yes                  |               | 12                                      | 0               |      |
|                           |                             | Interlaken                            | 1981                    | 1,200           | S                                  | IEA                                  | Y                |                    |                                 | 10                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100       | 100              | 0   |                                  |  |                      |               | -                                       | 0               |      |
|                           |                             |                                       | Total/Weighted Average  |                 | 11,950                             |                                      |                  |                    |                                 | L R                                  | 516                         | 39   | 10        | 100  | 15        | 99      | 10        | 100               | 2         | 100          | 2         | 100     | 0.3       | 85         | 200       | 89        | 6.5 - 8.5 | 100              | 81  | 0                                | 0.0  | 81                   |               | 6                                       | 42              | 0    |
| Tamworth Regional Council | No<br>No                    | Tamworth (Westdale)                   | 2011                    | 61,000</        |                                    |                                      |                  |                    |                                 |                                      |                             |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |           |           |                  |     |                                  |  |                      |               |   |                 |      |



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility              | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |           | Odour Complaints |                | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |         |                 |
|----------------------------|-----------------------------|---------------------------------------|-------------------------|-----------------|------------------------------------|--------------------------------------|------------------|--------------------|---------------------------------|--------------------------------------|-----------------------------|--|-----------|------|-----------|---------|-----------|-------------------|-----------|--------------|-----------|---------|-----------|------------|-----------|-----------|------------------|----------------|----------------------------------|--|----------------------|---------------|---|---------|-----------------|
|                            |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH        |                  | Overall Result |                                  |  |                      |               |   | No.     | No./ 1000 props |
|                            |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range     | % Samples        | % Samples      |                                  |  |                      |               |   | 68      | 69              |
|                            |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70        | 71               | 72             | 68                               | 69   | E4 % 63              | 64a           | 64b                                     | days 65 | days 67         |
| Tweed Shire Council        |                             | Banora Point                          | 2012                    | 75,000          | T                                  | BNR                                  | Y                | Y                  | R                               | 4,378                                | 160                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 10           | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 4                                |  |                      | Yes           |   | 52      | 0               |
|                            |                             | Murwillumbah                          | 2007                    | 16,000          | AT                                 | TF                                   | Y                | Y                  | R                               | 1,395                                | 301                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 5            | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 3                                |  |                      | Yes           |   | 26      | 0               |
|                            |                             | Kingscliff                            | 2008                    | 25,000          | AS                                 | BNR                                  | Y                | Y                  | R                               | 1,100                                | 40                          | 10   | 100       | 15   | 100       | 5       | 100       | 2                 | 100       | 5            | 100       | 0.5     | 100       | 100        | 100       | 6.5 - 8.5 | 100              | 100            | 1                                |  |                      | Yes           |   | 26      | 0               |
|                            |                             | Hastings Point                        | 2005                    | 16,000          | AS                                 | IEA                                  | Y                | Y                  | L                               | 1,018                                | 0                           | 10   | 100       | 15   | 100       | 10      | 100       | NL                | 100       | 5            | 100       | 1       | 100       | NL         | 100       | 6.5 - 8.5 | 100              | 100            | 2                                |  |                      | Yes           |   | 26      | 0               |
|                            |                             | Tumbulgum                             | 2000                    | 700             | AS                                 | IEA                                  | Y                | Y                  | R                               | 45                                   | 0                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 100       | NL           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 0                                |  |                      | Yes           |   | 26      | 0               |
|                            |                             | Tyalgum                               | 1990                    | 500             | AS                                 | IEA                                  | Y                | Y                  |                                 | 27                                   | 27                          | 25   | 100       | 50   | 58        | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 58             | 0                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Uki                                   | 2004                    | 600             | AS                                 | CEA                                  | Y                | Y                  |                                 | 23                                   | 23                          | 15   | 100       | 25   | 100       | 30      | 100       | 5                 | 81        | 10           | 100       | 6       | 100       | NL         | 100       | 6.5 - 8.5 | 100              | 81             | 0                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Burringbar/Mooball                    | 2013                    | 750             | AS                                 | IEA                                  | Y                | Y                  | R                               | 26                                   | 0                           | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 81        | 5            | 100       | 0.5     | 100       | 200        | 100       | 6.8 - 8.5 | 100              | 81             | 2                                |  |                      | Yes           |   | 26      | 0               |
|                            |                             | Total/Weighted Average                |                         | 134,550         |                                    |                                      |                  |                    | L R                             | 8,011                                | 551                         | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 10           | 100       | 0.5     | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 12                               | 0.4  | 100                  |               | 10                                      | 206     | 0               |
| Upper Hunter Shire Council | 100%                        | Scone                                 | 1988                    | 7,000           | AS                                 | TF                                   |                  |                    | R                               | 587                                  | 126                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 2                                |  |                      | Yes           |   | 12      | 0               |
|                            | 100% No                     | Aberdeen                              | 1983                    | 4,000           | AS                                 | IEA                                  |                  |                    | R                               | 178                                  |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 1                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Merriwa                               | 1970                    | 1,600           | S                                  | TF                                   |                  |                    | R                               | 65                                   |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      | Yes           |   | 4       | 0               |
|                            |                             | Murrurundi                            | 1979                    | 1,000           | AS                                 | IEA                                  |                  |                    | R                               | 70                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 0       | 0               |
|                            |                             | Total/Weighted Average                |                         | 13,600          |                                    |                                      |                  |                    | R                               | 900                                  | 126                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 3                                | 0.7  | 100                  |               | 3                                       | 28      | 0               |
| Upper Lachlan Council      | 100% No                     | Crookwell                             | 1996                    | 4,200           | T                                  | TF                                   | Y                | Y                  | R                               | 433                                  |                             | 20   | 100       | 30   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 0                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Taralga                               | 2011                    | 400             | AT                                 | IEA                                  | Y                | Y                  | L                               | 50                                   | 50                          | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 12      | 0               |
|                            |                             | Gunning                               | 1976                    | 1,000           | T                                  | IEA                                  | Y                |                    | R                               | 60                                   |                             | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Total/Weighted Average                |                         | 5,600           |                                    |                                      |                  |                    | L R                             | 543                                  | 50                          | 20   | 100       | 30   | 100       | 15      | 100       | 5                 | 100       | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 100            | 0                                | 0.0  | 100                  |               | 4                                       | 36      | 0               |
| Uralla Shire Council       |                             | Uralla                                | 1994                    | 3,960           | AS                                 | CEA                                  | Y                | Y                  | R                               | 131                                  | 0                           | 15   | 100       | 20   | 100       | 15      | 100       | 5                 | 42        | 10           | 100       | 1       | 100       | 200        | 100       | 6.5 - 8.5 | 100              | 42             | 0                                | 0.0  | 42                   | Yes           | 2                                       | 12      | 0               |
| Urana Shire Council        | No No                       | Urana                                 | 1995                    | 754             | S                                  | A                                    | Y                | Y                  |                                 | 55                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 51      | 0               |
|                            |                             | Oaklands                              | 1996                    | 520             | S                                  | A                                    | Y                | Y                  |                                 | 35                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 51      | 0               |
|                            |                             | Total/Weighted Average                |                         | 1,274           |                                    |                                      |                  |                    |                                 | 90                                   | 0                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                | 0.0  | 100                  |               | 2                                       | 102     | 0               |
| Wagga Wagga City Council   | No 100% No No               | Wagga (Narrung St)                    | 2010                    | 72,917          | T                                  | IEA                                  | Y                | Y                  |                                 | 4,015                                | 4,015                       | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | NL         | 100       | NL        | 100              | 100            | 12                               |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Wagga (Koorinal)                      | 2010                    | 18,750          | T                                  | IEA                                  | Y                | Y                  |                                 | 1,358                                | 1,358                       | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | NL         | 100       | NL        | 100              | 100            | 8                                |  |                      | Yes           |   | 12      | 0               |
|                            |                             | Collingullie                          | 2007                    | 250             | S                                  | A                                    |                  |                    | L                               | 9                                    |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 0       | 0               |
|                            |                             | Forest Hill                           | 1974                    | 6,000           | T                                  | IEA                                  |                  |                    |                                 | 247                                  | 247                         | 20   | 100       | 30   | 100       | NL      | 100       | NL                | 100       | 10           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      | Yes           |   | 4       | 0               |
|                            |                             | Uranquinty                            | 1984                    | 1,000           | S                                  | A                                    |                  |                    | L                               | 138                                  |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 1                                |  |                      |               |   | 0       | 0               |
|                            |                             | Tarcutta                              | 1988                    | 500             | S                                  | A                                    |                  |                    | L                               | 55                                   |                             | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 0       | 0               |
|                            |                             | Total/Weighted Average                |                         | 99,417          |                                    |                                      |                  |                    | L                               | 5,822                                | 5,620                       | 10   | 100       | 15   | 100       | 10      | 100       | 2                 | 100       | 2            | 100       | 0.3     | 100       | NL         | 100       | NL        | 100              | 100            | 21                               | 0.8  | 100                  |               | 8                                       | 28      | 0               |
| Wakool Shire Council       | No No No No                 | Barham                                | 1967                    | 1,600           | O                                  | TF                                   |                  |                    | L                               | 95                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | -       | 0               |
|                            |                             | Moulamein                             | 1967                    | 700             | AS                                 | IEA                                  | Y                | Y                  | L                               | 20                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | 0       | 0               |
|                            |                             | Wakool                                | 2013                    | -               | P                                  | A                                    |                  |                    | -                               | -                                    | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | -                                |  |                      |               |   | -       | -               |
|                            |                             | Murray Downs                          | 2005                    | 260             | T                                  | BNR                                  |                  | Y                  | L                               | 81                                   | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            | 0                                |  |                      |               |   | -       | 0               |
|                            |                             | Tooleybuc                             | 1987                    | 500             | P                                  | A                                    | Y                | Y                  | L                               | 146                                  | -                           | NL   | 100       | NL   | 100       | NL      | 100       | NL                | 100       | NL           | 100       | NL      | 100       | NL         | 100       | NL        | 100              | 100            |                                  |  |                      |               |   |         |                 |



APPENDIX D2: 2014-15 SEWAGE TREATMENT PERFORMANCE

| Water Utility | Licence Limits <sup>5</sup> | Sewage Treatment Works <sup>1,6</sup> | Year built or Augmented | Design Capacity | Standard of Treatment <sup>3</sup> | Type of Treatment Works <sup>4</sup> | Nitrogen Removal | Phosphorus Removal | Effluent Discharge <sup>3</sup> | Volume of Sewage Receiving Treatment | Volume of Effluent Recycled | 90 Percentile Licence Limits <sup>5</sup> and EPA Licence Compliance |           |      |           |         |           |                   |           |              |           |         |           |            |           |       |           |                |     | Odour Complaints |  | % Sge Treated that was compliant | Pollution Incident Response Management Plan <sup>7</sup> | No. of STW Operators | Sampling Days | Major Malfunction (Treatment Processes) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | BOD  |           | SS   |           | Total N |           | NH <sub>3</sub> N |           | Oil & Grease |           | Total P |           | E.coli     |           | pH    |           | Overall Result | No. | No./ 1000 props  |  |                                  |  |                      |               |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | mg/L   | % Samples | mg/L | % Samples | mg/L    | % Samples | mg/L              | % Samples | mg/L         | % Samples | mg/L    | % Samples | cfu /100mL | % Samples | range | % Samples | % Samples      | 68  | 69               |  |                                  |  |                      |               |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       |                         |                 |                                    |                                      |                  |                    |                                 |                                      |                             | 49   | 50        | 51   | 52        | 53      | 54        | 55                | 56        | 57           | 58        | 59      | 60        | 61         | 62        | 70    | 71        | 72             |     |                  |  |                                  |  |                      |               |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                             |                                       | 1                       | EP 10           | 3                                  | 2                                    | Yes/No 5         | Yes/No 6           |                                 | W18.5 ML 15                          | W26 ML 16                   |  |           |      |           |         |           |                   |           |              |           |         |           |            |           |       |           |                |     |                  |  |                                  |  |                      |               |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

- Notes:**
- Where a LWU has more than one treatment works, the reported Licence Compliance values have been pro-rated on the basis of the number of sampling days at each treatment works and are shown in **bold** in the final line for that LWU. Totals are also shown in **bold** for capacity (10), sewage volume treated (15), volume of effluent recycled (16), sampling days (65) and odour complaints (68). The days of major malfunction of treatment processes (67) are shown in bold and are the weighted average based on treatment works capacity.
  - For each licence limit, the value shown in the final line for each water utility is that required to be met for at least 50% of the utility's total licenced treatment works capacity.
  - For **"Standard of Treatment"** (3); P = Primary; S = Secondary; AS = Advanced Secondary; T = Tertiary; AT = Advanced Tertiary; nil = No Treatment. For **"Effluent Discharge"**; L = Land, O = Ocean, R = River.
  - For **"Type of Treatment Works"** (2); A= Oxidation Pond, AL = Aerated Lagoons, AN = Anaerobic Pond, BNR = Biological Nutrient Removal, C = Conventional Activated Sludge, CEA = Continuous Extended Aeration (Activated Sludge), CED = Common Effluent Disposal, IEA = Intermittent Extended Aeration (Activated Sludge), MBR = Membrane Bioreactor, RC = Dedicated Recycling, TF = Trickling Filter.
  - 90 Percentile Licence Limits have been reported at columns 49, 51, 53, 55, 57, 59, 61 and 70 unless noted as 100 percentile limits (100%) or no limits (NL).
  - The total sewage treatment capacity in regional NSW is 2,700,000 EP (column 10), the volume of sewage treated is 173 GL (column 15) and the volume of effluent recycled is 39 GL (column 16). The total volume of sewage collected is 179,000 ML (column 32 of Table 15 on page 192). The Statewide medians for % of sewage treated that was compliant (E4) and odour complaints per 1,000 properties are 100% and 1 respectively. Refer also to Tables 15 and 17 on pages 192 and 198.
  - Pollution Incident Response Management Plan - PIRMP - the sewage treatment works with a PIRMP available on the utility's website is shown in column 64a.
  - The total number of fully qualified sewage treatment works operators is 419. Refer also to Appendix I on page 360 and to page 36. Information on the DPI Water section 61 Reports for each treatment works is available in the NSW Performance Monitoring Database (refer to page 356).

APPENDIX D3: 2014-15 ABORIGINAL COMMUNITIES DRINKING WATER QUALITY RESULTS

| Community<br>[DOH Town reference shown in square brackets]                                   | Population<br><br>(1) | Supply System<br><br>(2)        | Water Utility<br><br>(3)                   | Compliance with 2011 NHMRC/NRMMC Australian Drinking Water Guidelines |                                  |                       |                                |                                  |                       |                                 |                                   |                        | Drinking Water<br>Quality Plan<br>Prepared? (Yes/No)<br><br>(13) |
|--|-----------------------|---------------------------------|--|---|----------------------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------------|-----------------------------------|------------------------|--|
|  |                       |                                 |  | Physical  |                                  |                       | Chemical                       |                                  |                       | Microbiological                 |                                   |                        |  |
|  |                       |                                 |  | Compliance<br>Achieved?<br>(4)  | % of Samples<br>Compliant<br>(5) | No. of Samples<br>(6) | Compliance<br>Achieved?<br>(7) | % of Samples<br>Compliant<br>(8) | No. of Samples<br>(9) | Compliance<br>Achieved?<br>(10) | % of Samples<br>Compliant<br>(11) | No. of Samples<br>(12) |  |
| Communities which provide their own drinking water supply                                    |                       |                                 |  |   |                                  |                       |                                |                                  |                       |                                 |                                   |                        |  |
| Baryulgil Square   | 50                    | Baryulgil Community             | Baryulgil                                  | Yes   | 80                               | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 11                     | Yes  |
| Malabugilmah   | 50                    | Malabugilmah Community          | Malabugilmah                               | Yes   | 80                               | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 11                     | Yes  |
| Thungutti  | 150                   | Thungutti (Bellbrook Community) | Thungutti                                  | Yes   | 100                              | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 26                     | Yes  |
| Clara Hart (Enngonia Reserve)  | 60                    | Enngonia                        | Clara Hart - <b>NON-POTABLE</b>            | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 2                      | Yes  |
| Jubullum Village   | 200                   | Jubullum                        | Jubullum Community                         | Yes   | 100                              | 2                     | Yes                            | 100                              | 2                     | No                              | 94                                | 16                     | Yes  |
| Toomelah   | 125                   | Toomelah                        | Toomelah                                   | Yes   | 80                               | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 27                     | Yes  |
| Weilmoringle/Wytalbar  | 60                    | Weilmoringle Community          | Weilmoringle - <b>NON-POTABLE</b>          | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 10                     | Yes  |
| Percent of communities tested which achieved compliance                                      |                       |                                 |  | 100% 5/5  |                                  |                       | 100% 5/5                       |                                  |                       | 80% 4/5                         |                                   |                        | 100% (7/7)   |
| Communities provided with a bulk drinking water supply by the local water utility            |                       |                                 |  |   |                                  |                       |                                |                                  |                       |                                 |                                   |                        |  |
| Cummeragunja   | 80                    | Cummeragunja                    | Goulburn Valley Water (Vic)                | Yes   | 100                              | 3                     | Yes                            | 100                              | 3                     | Yes                             | 100                               | 12                     | Yes  |
| Gundurimba   | 60                    | Rocky Creek LM                  | Lismore City Council                       | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 18                     | Yes  |
| Wamba Wamba  | 20                    | Murray Downs                    | Wakool Shire Council                       | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 16                     | Yes  |
| Brungle Reserve  | 90                    | Brungle                         | Tumut Shire Council                        | #   |                                  |                       | #                              |                                  |                       | No                              | 93                                | 15                     | Yes  |
| Nanima Reserve   | 110                   | Wellington                      | Wellington Council                         | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 14                     | Yes  |
| Alice Edwards Village  | 100                   | Bourke                          | Bourke Shire Council                       | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 18                     | Yes  |
| Balranald Reserve (Endeavour Drive)  | 20                    | Balranald                       | Balranald Shire Council                    | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 8                      | Yes  |
| Barwon 4   | 200                   | Brewarrina                      | Brewarrina Shire Council                   | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 10                     | Yes  |
| Box Ridge  | 100                   | Rocky Creek RM                  | Richmond Valley Shire Council              | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 12                     | Yes  |
| Brewarrina West (Dodge City)   | 100                   | Brewarrina                      | Brewarrina Shire Council                   | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 6                      | Yes  |
| Collarenebri Reserve (The Walli)   | 50                    | Collarenebri                    | Walgett Shire Council                      | #   |                                  |                       | #                              |                                  |                       | No                              | 89                                | 9                      | Yes  |
| Erambie  | 100                   | Cowra                           | Cowra Shire Council                        | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 12                     | Yes  |
| Warrali  | 40                    | Wilcannia                       | Central Darling Shire Council              | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 11                     | Yes  |
| Gingie Community   | 40                    | Gingie                          | Walgett Shire Council - <b>NON-POTABLE</b> | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 11                     | Yes  |
| Gulargambone Mission   | 6                     | Gulargambone                    | Coonamble Shire Council                    | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | Yes  |
| Karuah   | 200                   |                                 | Hunter Water                               | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | Yes  |
| Moonahcullah   | 50                    |                                 |  | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | No   |
| Goodooga Reserve   | 45                    | Goodooga                        | Brewarrina Shire Council                   | Yes   | 80                               | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 11                     | Yes  |
| Mallee   | 140                   | Wilcannia                       | Central Darling Shire Council              | Yes   | 60                               | 1                     | Yes                            | 100                              | 1                     | No                              | 92                                | 13                     | Yes  |
| Mehi Crescent  | 300                   | Moree                           | Moree Plains Shire Council                 | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 6                      | Yes  |
| Murrin Bridge  | 200                   | Murrin Bridge                   | Murrin Bridge Community                    | Yes   | 100                              | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 27                     | Yes  |
| Namatijira Avenue  | 150                   | Gol Gol                         | Wentworth Shire Council                    | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 13                     | Yes  |
| Namoi Reserve  | 60                    | Walgett                         | Walgett Shire Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 8                      | Yes  |
| New Merinee [Dareton]  | 600                   | Gol Gol                         | Wentworth Shire Council                    | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 25                     | Yes  |
| Stanley Village  | 175                   | Moree                           | Moree Plains Shire Council                 | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 6                      | Yes  |
| Summervale   | 30                    | Walcha                          | Walcha Council                             | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 11                     | Yes  |
| Wallaga Lake Community   | 150                   | Couria Creek                    | Bega Valley Shire Council                  | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 10                     | Yes  |
| Willow Bend  | 75                    | Condobolin                      | Lachlan Shire Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 21                     | Yes  |
| Narwon   | 100                   | Armidale                        | Armidale Dumaresq Council                  | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 4                      | Yes  |
| Cabbage Tree Island  | 253                   | Marom Creek                     | Ballina Shire Council                      | Yes   | 80                               | 1                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 12                     | Yes  |
| Corindi Beach  | 25                    | Coffs Harbour                   | Coffs Harbour City Council                 | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 2                      | Yes  |
| Quambone   | 15                    | Quambone                        | Coonamble Shire Council                    | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 10                     | Yes  |
| Walhollow Reserve  | 178                   | Walhallow                       | Liverpool Plains Shire Council             | Yes   | 80                               | 2                     | Yes                            | 100                              | 2                     | Yes                             | 100                               | 26                     | Yes  |
| Wongala  | 70                    | Coffs Harbour                   | Coffs Harbour City Council                 | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 2                      | Yes  |
| Percent of communities tested which achieved compliance                                      |                       |                                 |  | 100% 11/11  |                                  |                       | 100% 11/11                     |                                  |                       | 90% 27/30                       |                                   |                        | 97% (33/34)  |
| Communities provided with a full reticulated water supply service by the local water utility |                       |                                 |  |   |                                  |                       |                                |                                  |                       |                                 |                                   |                        |  |
| Bellwood   | 50                    | Bowraville                      | Nambucca Shire Council                     | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 12                     | Yes  |
| Boona Road Condobolin  | 20                    | Condobolin                      | Lachlan Shire Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 13                     | Yes  |
| Browns Flat [Nowra (Flat Rock)]  | 30                    | Flat Rock                       | Shoalhaven City Council                    | Yes   | 100                              | 26                    | Yes                            | 100                              | 26                    | Yes                             | 100                               | 61                     | Yes  |
| Cabarita [Tobwabba (Cabarita Community)]   | 250                   | Manning District WSS            | MidCoast Water                             | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 12                     | Yes  |
| Bowraville Village   | 275                   | Bowraville                      | Nambucca Shire Council                     | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 12                     | Yes  |
| Coomaditchie   | 117                   |                                 | Sydney Water                               | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | Yes  |
| Loftus Road Community  | 56                    | Maguires Crossing               | Kempsey Shire Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 16                     | Yes  |
| Figtree  | 50                    | South West Rocks                | Kempsey Shire Council                      | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | No   |
| Green Hill   | 248                   | Kempsey and Lower Macleay       | Kempsey Shire Council                      | Yes   | 100                              | 3                     | Yes                            | 100                              | 3                     | Yes                             | 100                               | 50                     | Yes  |
| Gunnedah Hill  | 10                    | Coonabarabran                   | Warrumbungle Shire Council                 | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 11                     | Yes  |
| Gulargambone Top   | 120                   | Gulargambone                    | Coonamble Shire Council                    | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 8                      | Yes  |
| La Perouse   |                       |                                 | Sydney Water                               | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | No   |
| Macleay [Macleay Lookout]  | 160                   | Lower Clarence                  | Clarence Valley Council                    | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 16                     | Yes  |
| Muli Muli  | 150                   | Urbenville                      | Tenterfield Shire Council                  | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 51                     | Yes  |
| New Burnt Bridge   | 72                    | Kempsey and Lower Macleay       | Kempsey Shire Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 19                     | Yes  |
| Orient Point   | 200                   | Northern Shoalhaven (Bamarang)  | Shoalhaven City Council                    | Yes   | 100                              | 1                     | Yes                            | 100                              | 1                     | Yes                             | 100                               | 5                      | Yes  |
| Peak Hill [Peak Hill Village]  | 50                    | Parkes                          | Parkes Shire Council                       | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 2                      | Yes  |
| Pippi Beach (Nyguru Village)   | 60                    | Lower Clarence                  | Clarence Valley Council                    | #   |                                  |                       | #                              |                                  |                       | #                               |                                   |                        | Yes  |
| Purfleet   | 500                   | Manning District WSS            | MidCoast Water                             | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 13                     | Yes  |
| Three Ways   | 75                    | Griffith                        | Griffith City Council                      | #   |                                  |                       | #                              |                                  |                       | Yes                             | 100                               | 3                      | Yes  |
| Percent of communities tested which achieved compliance                                      |                       |                                 |  | 100% 3/3  |                                  |                       | 100% 3/3                       |                                  |                       | 100% 16/16                      |                                   |                        | 90% (18/20)  |
| ALL COMMUNITIES - Percent of communities tested which achieved compliance                    |                       |                                 |  | 100% 19/19  |                                  |                       | 100% 19/19                     |                                  |                       | 92% 47/51                       |                                   |                        | 95% (58/61)  |

**Notes:** 1. Drinking water quality for a Community has complied with the 2011 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) for microbiological water quality (health related - shown as 'Yes' in column (10) above) if the required number of samples has been tested and at least 98% of samples had no *E.coli*. The 3 non-potable water supplies (column (3)) are not included in the totals or percent of communities for compliance with ADWG (columns (5), (8) and (11)), which are for the potable water supplied. For the 4 communities where the potable drinking water supply did not comply for microbiological water quality, 'No' is shown in column (10) and the percentage of samples which complied is shown in column (11). Where *E.coli* is detected in a microbiological sample, further investigation is needed to determine whether there is a real problem with drinking water quality in accordance with NSW Health protocol (<http://www.health.nsw.gov.au/environment/water/Pages/nswhrp-microbiological.aspx>).

2. Similarly, for chemical water quality (health related) to be satisfactory (shown as 'Yes' in column (7)), the 95th percentile of results must meet the guidelines and physical (aesthetic) water quality is satisfactory (shown as 'Yes' in column (4)) if the mean value of results meets the guideline values. Although physical and chemical samples were not tested for the 33 communities with '#' in columns (4) and (7), the water supply for the local water utility which supplies each of these communities complied with ADWG for both physical and chemical water quality in 2013-14 (Table 12 on page 183). The physical characteristics tested (aesthetic) are true colour, turbidity, total hardness as CaCO3, total dissolved solids (TDS) and pH. The chemical characteristics tested (health related) are antimony, arsenic, barium, boron, cadmium, chromium, copper, fluoride, lead, manganese, mercury, molybdenum, nickel, nitrate, nitrite, selenium, silver and sulfate. Other chemical characteristics tested which are not health related are aluminium, calcium, chloride, iodine, iron, magnesium, sodium and zinc.



APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility             | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |         |       |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |                            |                             | Flows                       |               |              |     |     |     |
|---------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|--------------|---------------|---------|-------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|-----|-----|-----|
|                           |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site | Other | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Av. Dry weather - Perm Pop   | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |     |     |     |
|                           |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              |     |     |     |
|                           |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              |     |     |     |
| 1                         | 2                                     | 3                                    | 4                              | 5                      | 6                                  | 7                        | 8                      | 9                        | 10                                | 11           | 12            | 13      | 14    | 15                       | 16                               | 18                          | 19                       | 20                      | 21                                       | 22                           | 23                         | L/s                         | L/s                         | L/s           | L/s          | L/s | L/s |     |
| Albury City Council       | Albury (Kremur St)                    | BNR                                  |                                | 2,560                  |                                    | 0                        | 2,560                  | 0                        | 0                                 | 440          | 759           | 0       | 0     | 0                        | 1,199                            | 0                           | 1,199                    | 2,560                   | 47                                       | 0                            | 0                          | 1,077                       | 81                          | 80            | 128          | 93  | 13  | -   |
|                           | Albury (Waterview)                    | BNR                                  |                                | 1,855                  |                                    | 0                        | 1,855                  | 0                        | 0                                 | 440          | 759           | 0       | 0     | 0                        | 1,199                            | 0                           | 1,199                    | 1,855                   | 65                                       | 0                            | 0                          | 2,007                       | 60                          | 54            | 130          | 65  | 13  | -   |
|                           | Hume Weir                             | IEA                                  |                                | 14                     |                                    | 0                        | 14                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 18                      | 0  | 0                            | 11                         | 0                           | 0.6                         | 0.8           | 0.4          | 0.8 | -   | -   |
|                           | Lara Lakes                            | A                                    |                                | 11                     |                                    | 0                        | 11                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 11                      | 0  | 0                            | 0                          | 11                          | 0.4                         | 0.4           | 0.4          | 0.4 | -   | -   |
|                           | Total/Weighted Average                |                                      |                                | 4,440                  |                                    | 0                        | 4,440                  | 0                        | 0                                 | 880          | 1,518         | 0       | 0     | 0                        | 2,398                            | 0                           | 2,398                    | 4,444                   | 54                                       | 0                            | 11                         | 3,095                       | 141                         | 136           | 260          | 158 | 26  | -   |
| Armidale Dumaresq Council | Armidale                              | TF                                   |                                | 2,228                  |                                    | 0                        | 2,228                  | 0                        | 0                                 | 910          | 0             | 0       | 0     | 0                        | 910                              | 0                           | 910                      | 2,227                   | 41                                       | 0                            | 657                        | 0                           | 66                          | -             | 107          | -   | 20  | 556 |
| Ballina Shire Council     | Ballina                               | MBR                                  |                                | 2,954                  |                                    | 0                        | 2,954                  | -                        | 233                               | -            | -             | -       | -     | -                        | 233                              | -                           | 233                      | 2,954                   | 8  | 2,954                        | -                          | -                           | 75                          | -             | -            | -   | 19  | -   |
|                           | Lennox Head                           | IEA                                  |                                | 1,619                  |                                    | 0                        | 1,619                  | 0                        | 10                                | 0            | 0             | 0       | 0     | 0                        | 10                               | 0                           | 10                       | 1,619                   | 1  | 1,609                        | 0                          | 0                           | 42                          | -             | -            | -   | 23  | -   |
|                           | Alstonville                           | IEA                                  |                                | 630                    |                                    | 0                        | 630                    | 0                        | 254                               | 0            | 0             | 0       | 0     | 0                        | 254                              | 0                           | 254                      | 626                     | 41                                       | 0                            | 372                        | 0                           | 17                          | -             | -            | -   | 17  | -   |
|                           | Wardell                               | IEA                                  |                                | 198                    |                                    | 0                        | 198                    | 0                        | 20                                | 0            | 0             | 0       | 0     | 0                        | 20                               | 0                           | 20                       | 198                     | 10                                       | 0                            | 188                        | 0                           | 6                           | -             | -            | -   | 2   | -   |
|                           | Total/Weighted Average                |                                      |                                | 5,401                  |                                    | 0                        | 5,401                  | 0                        | 517                               | 0            | 0             | 0       | 0     | 0                        | 517                              | 0                           | 517                      | 5,397                   | 10                                       | 4,563                        | 560                        | 0                           | 140                         | -             | -            | -   | 60  | -   |
| Balranald Council         | Balranald                             | AN                                   |                                | 105                    |                                    | 0                        | 105                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 105                     | 0  | 0                            | 0                          | 105                         | 3                           | 4             | 14           | 14  | 0.4 | 8   |
|                           | Euston                                | AN                                   |                                | 79                     |                                    | 0                        | 79                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 79                      | 0  | 0                            | 0                          | 79                          | 2                           | 2             | 27           | 27  | 0.6 | -   |
|                           | Total/Weighted Average                |                                      |                                | 184                    |                                    | 0                        | 184                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 184                     | 0  | 0                            | 0                          | 184                         | 6                           | 6             | 41           | 41  | 1.0 | 8   |
| Bathurst Regional Council | Bathurst                              | IEA                                  |                                | 4,116                  |                                    | 0                        | 4,116                  | 0                        | 0                                 | 0            | 3,059         | 653     | 0     | 0                        | 3,712                            | 0                           | 3,712                    | 3,731                   | 99                                       | 0                            | 0                          | 0                           | 116                         | 127           | 150          | 129 | 16  | 182 |
| Bega Valley Shire Council | Wolumla                               | MBR                                  |                                | 21                     |                                    | 0                        | 21                     | 0                        | 1                                 | 19           | 0             | -       | 0     | 0                        | 20                               | 0                           | 20                       | 21                      | 95                                       | 0                            | 0                          | 0                           | 0.6                         | 0.5           | -            | -   | 0.1 | -   |
|                           | Cobargo                               | MBR                                  |                                | 22                     |                                    | 0                        | 22                     | 0                        | 0                                 | 18           | 0             | 0       | 0     | 0                        | 18                               | 0                           | 18                       | 22                      | 82                                       | 0                            | 4                          | 0                           | 0.7                         | 0.8           | -            | -   | 0.2 | -   |
|                           | Candelo                               | MBR                                  |                                | 18                     |                                    | 0                        | 18                     | 0                        | 0                                 | 10           | 0             | -       | 0     | 0                        | 10                               | 0                           | 10                       | 18                      | 56                                       | 0                            | 6                          | 0                           | 0.6                         | 0.6           | -            | -   | 0.1 | -   |
|                           | Kalaru                                | MBR                                  |                                | 13                     |                                    | 0                        | 13                     | 0                        | 12                                | 0            | 0             | -       | 0     | 0                        | 12                               | 0                           | 12                       | 13                      | 92                                       | 0                            | 0                          | 0                           | 0.4                         | 0.5           | -            | -   | 0.1 | -   |
|                           | Tura Beach                            | CEA                                  |                                | 201                    |                                    | 0                        | 201                    | 0                        | 25                                | 0            | 0             | -       | 0     | 0                        | 25                               | 0                           | 25                       | 201                     | 12                                       | 0                            | 0                          | 168                         | 6                           | 7             | -            | -   | 1.3 | -   |
|                           | Eden                                  | IEA                                  |                                | 361                    |                                    | 0                        | 361                    | 0                        | 64                                | 0            | 0             | 0       | 0     | 0                        | 64                               | 0                           | 64                       | 361                     | 18                                       | 283                          | 0                          | 0                           | 9                           | 12            | -            | -   | 7   | -   |
|                           | Tathra                                | CEA                                  |                                | 139                    |                                    | 0                        | 139                    | 0                        | 126                               | 0            | 0             | -       | 0     | 0                        | 126                              | 0                           | 126                      | 139                     | 91                                       | 0                            | 0                          | 0                           | 3                           | 6             | -            | -   | 2   | -   |
|                           | Bega                                  | IEA                                  |                                | 455                    |                                    | 0                        | 455                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 455                     | 0  | 0                            | 434                        | 0                           | 11                          | 14            | -            | -   | 10  | -   |
|                           | Bermagui                              | CEA                                  |                                | 216                    |                                    | 0                        | 216                    | 0                        | 38                                | 0            | 0             | -       | 0     | 0                        | 38                               | 0                           | 38                       | 216                     | 18                                       | 174                          | 0                          | 0                           | 5                           | 9             | -            | -   | 4   | -   |
|                           | Merimbula                             | IEA                                  |                                | 798                    |                                    | 0                        | 798                    | 0                        | 101                               | 32           | 0             | -       | 0     | 0                        | 133                              | 0                           | 133                      | 798                     | 17                                       | 500                          | 0                          | 112                         | 19                          | 32            | -            | -   | 8   | -   |
|                           | Total/Weighted Average                |                                      |                                | 2,244                  |                                    | 0                        | 2,244                  | 0                        | 367                               | 79           | 0             | 0       | 0     | 0                        | 446                              | 0                           | 446                      | 2,244                   | 20                                       | 957                          | 444                        | 280                         | 57                          | 83            | -            | -   | 32  | -   |
| Bellingen Shire Council   | Urunga                                | IEA                                  |                                | 345                    |                                    | 0                        | 345                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 345                     | 0  | 0                            | 345                        | 0                           | 12                          | -             | 116          | -   | 4   | -   |
|                           | Bellingen                             | IEA                                  |                                | 322                    |                                    | 0                        | 322                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 322                     | 0  | 0                            | 322                        | 0                           | 14                          | -             | 109          | -   | 5   | -   |
|                           | Dorrigo                               | TF                                   |                                | 97                     |                                    | 0                        | 97                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 97                      | 0  | 0                            | 97                         | 0                           | 7                           | -             | 54           | -   | 2   | -   |
|                           | Total/Weighted Average                |                                      |                                | 764                    |                                    | 0                        | 764                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 764                     | 0  | 0                            | 764                        | 0                           | 33                          | -             | 279          | -   | 11  | -   |
| Berrigan Shire Council    | Tocumwal                              | TF                                   |                                | 270                    |                                    | 0                        | 270                    | 0                        | 270                               | 0            | 0             | 0       | 0     | 0                        | 270                              | 0                           | 270                      | 275                     | 98                                       | 0                            | 0                          | 270                         | 7                           | 8             | 15           | 19  | 45  | 30  |
|                           | Finley                                | TF                                   |                                | 225                    |                                    | 0                        | 225                    | 0                        | 225                               | 0            | 0             | 0       | 0     | 0                        | 225                              | 0                           | 225                      | 274                     | 82                                       | 0                            | 0                          | 220                         | 3                           | 4             | 4            | 5   | 25  | 20  |
|                           | Barooga                               | A                                    |                                | 105                    |                                    | -                        | 105                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 105                     | 0  | 0                            | 0                          | 105                         | 2                           | 3             | 3            | 4   | 8   | 25  |
|                           | Berrigan                              | TF                                   |                                | 95                     |                                    | 0                        | 95                     | 0                        | 95                                | 0            | 0             | 0       | 0     | 0                        | 95                               | 0                           | 95                       | 96                      | 99                                       | 0                            | 0                          | 95                          | 3                           | 3             | 3            | 4   | 10  | 30  |
|                           | Total/Weighted Average                |                                      |                                | 695                    |                                    | 0                        | 695                    | 0                        | 590                               | 0            | 0             | 0       | 0     | 0                        | 590                              | 0                           | 590                      | 750                     | 79                                       | 0                            | 0                          | 690                         | 15                          | 17            | 25           | 31  | 88  | 105 |
| Bland Shire Council       | West Wyalong                          | C                                    |                                | 281                    |                                    | 0                        | 281                    | 0                        | 262                               | 0            | 0             | 0       | 0     | 0                        | 262                              | 0                           | 262                      | 262                     | 100                                      | 0                            | 0                          | 0                           | 8                           | 9             | 10           | 10  | 1.4 | 9   |
|                           | Ungarie                               | C                                    |                                | 53                     |                                    | 0                        | 53                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 0                       |  | 0                            | 0                          | 0                           | 9                           | 9             | 9            | 9   | -   | 9   |
|                           | Barmedman                             | A                                    |                                | 25                     |                                    | 0                        | 25                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 24                      | 0  | 0                            | 0                          | 24                          | 9                           | 9             | 9            | 9   | 0.5 | 9   |
|                           | Total/Weighted Average                |                                      |                                | 359                    |                                    | 0                        | 359                    | 0                        | 262                               | 0            | 0             | 0       | 0     | 0                        | 262                              | 0                           | 262                      | 286                     | 92                                       | 0                            | 0                          | 24                          | 26                          | 27            | 28           | 28  | 2   | 27  |
| Blayney Shire Council     | Blayney                               | IEA                                  |                                | 308                    |                                    | 0                        | 308                    | 0                        | 211                               | 0            | 0             | 0       | 0     | 0                        | 211                              | 0                           | 211                      | 308                     | 69                                       | 0                            | 0                          | 0                           | 10                          | 11            | 65           | 65  | 1   | 65  |
| Bogan Shire Council       | Nyngan                                | A                                    |                                | 180                    |                                    | 0                        | 180                    | 0                        | 0                                 | 25           | 0             | 0       | 0     | 0                        | 25                               | 0                           | 25                       | 180                     | 14                                       | 0                            | -                          | -                           | 6                           | 6             | 9            | 9   | 1   | 11  |
| Bombala Council           | Bombala                               | TF                                   |                                | 7                      |                                    | 0                        | 7                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 170                     | 0  | 0                            | 0                          | 0                           | 40                          | 40            | 40           | 11  | -   | 28  |
|                           | Delegate                              | AL                                   |                                | 0                      |                                    | 0                        | 0                      | 0                        | 20                                | 0            | 0             | 0       | 0     | 0                        | 20                               | 0                           | 20                       | 35                      | 57                                       | 0                            | 0                          | 0                           | -                           | 1.0           | 2            | 2   | -   | -   |
|                           | Total/Weighted Average                |                                      |                                | 7                      |                                    | 0                        | 7                      | 0                        | 20                                | 0            | 0             | 0       | 0     | 0                        | 20                               | 0                           | 20                       | 205                     | 10                                       | 0                            | 0                          | 0                           | 40                          | 41            | 42           | 13  | -   | 28  |
| Boorowa Council           | Boorowa                               | AN                                   |                                | 127                    |                                    | 0                        | 127                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 126                     | 0  | 0                            | 126                        | 0                           | 3                           | 8             | 4            | 10  | 1   | 23  |
| Bourke Shire Council      | Bourke                                | A                                    |                                | 200                    |                                    | 0                        | 200                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 170                     | 0  | 0                            | 0                          | 179                         | 5                           | 5             | 5            | 5   | 2   | 5   |
| Brewarrina Shire Council  | Brewarrina                            | TF                                   |                                | 155                    |                                    | 0                        | 155                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 120                     | 0  | 0                            | 0                          | 0                           | 3                           | 5             | 6            | 8   | -   | -   |
|                           | Goodooga                              | A                                    |                                | 27                     |                                    | 0                        | 27                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 25                      | 0  | 0                            | 0                          | 0                           | -                           | -             | -            | -   | -   | -   |
|                           | Barwon Four                           | A                                    |                                | 0                      |                                    | -                        | 0                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -                          | -                           | -                           | -             | -            | -   | -   | -   |
|                           | Total/Weighted Average                |                                      |                                | 182                    |                                    | 0                        | 182                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 145                     | 0  | 0                            | 0                          | 0                           | 3                           | 5             | 6            | 8   | -   | -   |

APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility                 | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |         |       |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |               |      | Flows                      |                            |                             |                             |               |              |
|-------------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|--------------|---------------|---------|-------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|---------------|------|----------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|
|                               |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site | Other | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Ocean                        | River - Creek | Land | Av. Dry weather - Perm Pop | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |
|                               |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |
|                               |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |
| 1                             | 2                                     | 3                                    | 4                              | 5                      | 6                                  | 7                        | 8                      | 9                        | 10                                | 11           | 12            | 13      | 14    | 15                       | 16                               | 18                          | 19                       | 20                      | 21                                       | 22                           | 23            | L/s  | L/s                        | L/s                        | L/s                         | L/s                         | L/s           |              |
| Byron Shire Council           | Byron Bay West                        | BNR                                  |                                | 1,894                  |                                    | 0                        | 1,894                  | 0                        | 288                               | 121          | 0             | 0       | 0     | 0                        | 409                              | 0                           | 409                      | 1,894                   | 22                                       | 0                            | 1,485         | 0    | 50                         | 55                         | 149                         | -                           | 13            | 227          |
|                               | Ocean Shores                          | IEA                                  |                                | 568                    |                                    | 0                        | 568                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 568                     | 0  | 0                            | 568           | 0    | 15                         | -                          | 31                          | -                           | 13            | 228          |
|                               | Brunswick Valley                      | BNR                                  |                                | 505                    |                                    | 0                        | 505                    | 0                        | 0                                 | 27           | 0             | 0       | 0     | 0                        | 27                               | 0                           | 27                       | 505                     | 5  | 0                            | 478           | 27   | 16                         | 19                         | 31                          | 70                          | 20            | 250          |
|                               | Bangalow                              | MBR                                  |                                | 131                    |                                    | 0                        | 131                    | 0                        | 0                                 | 8            | 0             | 0       | 0     | 0                        | 8                                | 0                           | 8                        | 131                     | 6  | 0                            | 123           | 8    | 4                          | 4                          | 5                           | 5                           | 4             | 45           |
|                               | Total/Weighted Average                |                                      |                                | 3,098                  |                                    | 0                        | 3,098                  | 0                        | 288                               | 156          | 0             | 0       | 0     | 0                        | 444                              | 0                           | 444                      | 3,098                   | 14                                       | 0                            | 2,654         | 35   | 85                         | 77                         | 216                         | 75                          | 49            | 750          |
| Cabonne Council               | Canowindra                            | TF                                   | -                              |                        |                                    | 0                        | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Molong                                | AL                                   | -                              |                        |                                    | 0                        | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Cudal                                 | A                                    | -                              |                        |                                    | 0                        | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Eugowra                               | A                                    | -                              |                        |                                    | 0                        | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Total/Weighted Average                |                                      |                                | 0                      |                                    | 0                        | 0                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | -                                | 0                           | 108                      | 0                       |  | 0                            | 0             | 0    | -                          | -                          | -                           | -                           | -             | -            |
| Carrathool Shire Council      | Hillston                              | IEA                                  |                                | 101                    |                                    | 101                      | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 101                     | 0  | -                            | -             | 101  | -                          | -                          | -                           | -                           | -             | -            |
|                               | Goolgowi                              | A                                    |                                | 0                      |                                    | 0                        | 0                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 0                       |  | 0                            | 0             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Rankins Springs                       | A                                    |                                | 0                      |                                    | 0                        | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Total/Weighted Average                |                                      |                                | 101                    |                                    | 0                        | 101                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 101                     | 0  | 0                            | 0             | 101  | -                          | -                          | -                           | -                           | -             | -            |
| Central Darling Shire Council | Wilcannia                             | A                                    |                                | 80                     | -                                  | 80                       | 0                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 80                      | 0  | 0                            | 0             | 80   | 6                          | 7                          | 15                          | 18                          | 0             | 0            |
| Clarence Valley Council       | Grafton North                         | TF                                   |                                | 725                    |                                    | 0                        | 725                    | 0                        | 15                                | -            | -             | -       | -     | -                        | 15                               | -                           | 15                       | 725                     | 2  | 0                            | 710           | 0    | 30                         | 30                         | 35                          | 35                          | 10            | -            |
|                               | Yamba                                 | IEA                                  |                                | 779                    |                                    | 0                        | 779                    | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 779                     | 0  | 779                          | 0             | 0    | 23                         | 33                         | 30                          | 40                          | 6             | -            |
|                               | Clarenza                              | IEA                                  |                                | 762                    |                                    | 0                        | 762                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 0                        | 762                     | 0  | 0                            | 761           | 0    | 20                         | 20                         | 30                          | 30                          | 18            | -            |
|                               | Coutts Crossing                       | IEA                                  |                                | 36                     |                                    | 0                        | 36                     | -                        | 13                                | -            | -             | -       | -     | -                        | 13                               | -                           | 13                       | 36                      | 36                                       | 0                            | 23            | 0    | 1.0                        | 1.0                        | 1.5                         | 1.5                         | 0.9           | -            |
|                               | Woodford Island                       | IEA                                  |                                | 450                    |                                    | 0                        | 450                    | 0                        | 113                               | -            | -             | -       | -     | -                        | 113                              | -                           | 113                      | 450                     | 25                                       | 261                          | 0             | 0    | 12                         | 12                         | 15                          | 15                          | 7             | -            |
|                               | Iluka                                 | IEA                                  |                                | 105                    |                                    | 0                        | 105                    | 0                        | 54                                | -            | -             | -       | -     | -                        | 54                               | -                           | 54                       | 105                     | 51                                       | 2                            | 0             | 0    | 3                          | 7                          | 5                           | 10                          | 0             | -            |
|                               | Total/Weighted Average                |                                      |                                | 2,856                  |                                    | 0                        | 2,856                  | 0                        | 195                               | 0            | 0             | 0       | 0     | 0                        | 195                              | 0                           | 195                      | 2,856                   | 7  | 1,042                        | 1,494         | 0    | 89                         | 103                        | 117                         | 132                         | 41            | -            |
| Cobar Shire Council           | Cobar                                 | CEA                                  |                                | 435                    |                                    | 0                        | 435                    | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 435                      | 0                       | 0  | 0                            | 70            | 8    | 9                          | 9                          | 10                          | 2                           | 20            |              |
| Coffs Harbour City Council    | Coffs Harbour                         | CEA                                  |                                | 5,369                  | -                                  | 5,369                    | -                      | 288                      | -                                 | -            | 207           | -       | -     | 495                      | -                                | 495                         | 5,362                    | 9                       | 4,867                                    | -                            | -             | 113  | 113                        | 184                        | 184                         | 106                         | -             | -            |
|                               | Sawtell                               | IEA                                  |                                | 535                    | -                                  | 535                      | -                      | 21                       | -                                 | -            | -             | -       | -     | 21                       | -                                | 21                          | 535                      | 4                       | 514                                      | -                            | -             | 40   | 40                         | 48                         | 48                          | 22                          | -             | -            |
|                               | Moonee/Emerald                        | BNR                                  |                                | 244                    | -                                  | 244                      | -                      | -                        | 92                                | -            | -             | -       | -     | -                        | -                                | 0                           | 244                      | 0                       | 152                                      | -                            | -             | 6    | 6                          | 9                          | 9                           | 5                           | -             | -            |
|                               | Woolgoolga                            | IEA                                  |                                | 1,101                  | -                                  | 1,101                    | -                      | -                        | 369                               | -            | -             | -       | -     | -                        | -                                | 0                           | 1,101                    | 0                       | 732                                      | -                            | -             | 23   | 23                         | 29                         | 29                          | 20                          | -             | -            |
|                               | Corindi Beach                         | IEA                                  |                                | 111                    |                                    | 111                      | -                      | -                        | 36                                | -            | -             | -       | -     | -                        | -                                | 0                           | 111                      | 0                       | -  | 75                           | 3             | 3    | 4                          | 4                          | 4                           | 1                           | -             | -            |
|                               | Deep Sea Release                      |                                      |                                |                        |                                    | 0                        |                        |                          |                                   |              |               |         |       |                          |                                  | 0                           | 0                        |                         |  |                              |               |      |                            |                            |                             |                             |               |              |
|                               | Total/Weighted Average                |                                      |                                | 7,360                  |                                    | 0                        | 7,360                  | 0                        | 309                               | 497          | 0             | 207     | 0     | 0                        | 516                              | 0                           | 1,013                    | 7,353                   | 14                                       | 6,265                        | 0             | 75   | 184                        | 184                        | 273                         | 273                         | 153           | -            |
| Coolamon Shire Council        | Coolamon                              | TF                                   |                                | 75                     |                                    | 0                        | 75                     | 0                        | 0                                 | 0            | 0             | 75      | 0     | 0                        | 75                               | 0                           | 75                       | 75                      | 100                                      | 0                            | 0             | 75   | 3                          | 3                          | 4                           | 4                           | -             | -            |
|                               | Ganmain                               | A                                    |                                | 30                     |                                    | 0                        | 30                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 30                       | 0                       | 0  | 0                            | 30            | -    | -                          | -                          | -                           | -                           | -             | -            |
|                               | Total/Weighted Average                |                                      |                                | 105                    |                                    | 0                        | 105                    | 0                        | 0                                 | 0            | 0             | 75      | 0     | 0                        | 75                               | 0                           | 75                       | 105                     | 71                                       | 0                            | 0             | 105  | 3                          | 3                          | 4                           | 4                           | -             | -            |
| Cooma-Monaro Council          | Cooma (The Glen)                      | IEA                                  |                                | 753                    |                                    | 0                        | 753                    | 0                        | 0                                 | 0            | 0             | 5       | 0     | 0                        | 5                                | 0                           | 5                        | 753                     | 1  | 0                            | 534           | 0    | 22                         | 26                         | 26                          | 34                          | 13            | 149          |
|                               | Nimmitabel                            | IEA                                  |                                | 29                     |                                    | 0                        | 29                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 29                       | 0                       | 0  | 29                           | 0             | 0.1  | -                          | 0.5                        | 0.1                         | 0.6                         | -             | -            |
|                               | Total/Weighted Average                |                                      |                                | 782                    |                                    | 0                        | 782                    | 0                        | 0                                 | 0            | 0             | 5       | 0     | 0                        | 5                                | 0                           | 5                        | 782                     | 1  | 0                            | 563           | 0    | 22                         | 26                         | 26                          | 34                          | 13            | 149          |
| Coonamble Shire Council       | Coonamble                             | TF                                   |                                | 254                    |                                    | 0                        | 254                    | 0                        | 0                                 | 59           | -             | -       | -     | 59                       | -                                | 59                          | 240                      | 25                      | 0  | 0                            | 0             | 48   | 48                         | 48                         | 48                          | 1                           | 48            |              |
|                               | Gulgambone                            | IEA                                  |                                | 27                     |                                    | 0                        | 27                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 24                       | 0                       | 0  | 20                           | -             | 7    | 7                          | 7                          | 7                           | 0                           | 7             |              |
|                               | Total/Weighted Average                |                                      |                                | 281                    |                                    | 0                        | 281                    | 0                        | 0                                 | 59           | 0             | 0       | 0     | 0                        | 59                               | 0                           | 59                       | 264                     | 22                                       | 0                            | 20            | 0    | 55                         | 55                         | 55                          | 55                          | 1             | 55           |
| Cootamundra Shire Council     | Cootamundra                           | AL                                   |                                | 496                    |                                    | 0                        | 496                    | 0                        | 136                               | 0            | 348           | 0       | 2     | 0                        | 486                              | 0                           | 486                      | 496                     | 98                                       | 0                            | 0             | 0    | 15                         | 20                         | 20                          | 1                           | 5             | 120          |
| Corowa Shire Council          | Corowa                                | TF                                   |                                | 482                    |                                    | 0                        | 482                    | 0                        | 0                                 | 160          | 0             | 0       | 0     | 0                        | 160                              | 0                           | 160                      | 482                     | 33                                       | 0                            | 0             | 322  | 14                         | 15                         | 20                          | 20                          | 3             | -            |
|                               | Mulwala                               | IEA                                  |                                | 271                    |                                    | 0                        | 271                    | 0                        | 0                                 | 0            | 0             | 24      | 0     | 0                        | 24                               | 0                           | 24                       | 271                     | 9  | 0                            | 247           | 0    | 8                          | 9                          | 15                          | 15                          | 1             | -            |
|                               | Howlong                               | A                                    |                                | 130                    |                                    | 0                        | 130                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        |                                  | 0                           | 130                      | 0                       | 0  | 0                            | 58            | 4    | 4                          | 9                          | 9                           | 1                           | -             |              |
|                               | Total/Weighted Average                |                                      |                                | 883                    |                                    | 0                        | 883                    | 0                        | 0                                 | 160          | 0             | 24      | 0     | 0                        | 184                              | 0                           | 184                      | 883                     | 21                                       | 0                            | 247           | 380  | 26                         | 28                         | 44                          | 44                          | 5             | -            |
|                               | Broken Hill (Willis St)               | TF                                   |                                | 1,079                  |                                    | 0                        | 1,079                  | -                        | 524                               | -            | -             | -       | -     | -                        | 524                              | -                           | 524                      | 1,079                   | 49                                       | 0                            | 0             | 447  | 34                         | -                          | 56                          | -                           | 7             | 81           |
| Essential Energy              | Broken Hill South                     | TF                                   |                                | 279                    | -                                  | 279                      | -                      | -                        | 252                               | -            | -             | -       | -     | -                        | 252                              | -                           | 252                      | 279                     | 90                                       | -                            | -             | 0    | 9                          | -                          | 14                          | -                           | 1             | 15           |
|                               | Total/Weighted Average                |                                      |                                | 1,358                  |                                    | 0                        | 1,358                  | 0                        | 776                               | 0            | 0             | 0       | 0     | 0                        | 776                              | 0                           | 776                      | 1,358                   | 57                                       | 0                            | 0             | 447  | 43                         | -                          | 69                          | -                           | 8             | 96           |
|                               | Cowra Shire Council                   | Cowra                                | IEA                            |                        | 552                                |                          | 0                      | 552                      | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 552                     | 0  | 0                            | 552           | 0    | -                          | -                          | -                           | -                           | -             | -            |
| Deniliquin Council            | Deniliquin                            | TF                                   |                                | 565                    |                                    | 0                        | 565                    | 0                        | 0                                 | 54           | 0             | 0       | 0     | 0                        | 54                               | 0                           | 54                       | 482                     | 11                                       | 0                            | 0             | 428  | 17                         | 19                         | 147                         | 156                         | 4             | -            |
| Dubbo City Council            | Wongarbon                             | A                                    |                                | 33                     |                                    | 33                       | -                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 0                       |  | 0                            | 0             | -    | -                          | -                          | -                           | -                           | -             | -            |



APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility              | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |         |       |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |               |      | Flows                      |                            |                             |                             |               |              |   |  |
|----------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|--------------|---------------|---------|-------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|---------------|------|----------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|---|--|
|                            |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site | Other | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Ocean                        | River - Creek | Land | Av. Dry weather - Perm Pop | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |   |  |
|                            |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |   |  |
|                            |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |   |  |
| Eurobodalla Shire Council  | Batemans Bay                          | CEA                                  |                                | 1,794                  | -                                  | -                        | 1,794                  | 0                        | 96                                | 0            | 0             | 9       | 0     | 0                        | 105                              | 0                           | 105                      | 1,794                   | 6  | 1,689                        | 0             | 0    | 48                         | 64                         | 85                          | 76                          | 24            | -            | - |  |
|                            | Narooma                               | CEA                                  |                                | 610                    | -                                  | 0                        | 610                    | 0                        | 0                                 | -            | -             | 4       | -     | -                        | 4                                | -                           | 4                        | 610                     | 1  | 606                          | 0             | 0    | 15                         | 22                         | 32                          | 34                          | 17            | -            | - |  |
|                            | Moruya                                | CEA                                  |                                | 358                    | -                                  | 0                        | 358                    | 0                        | 42                                | 0            | 0             | 7       | 0     | 0                        | 49                               | 0                           | 49                       | 358                     | 14                                       | 0                            | 310           | 0    | 10                         | 12                         | 21                          | 21                          | 5             | -            | - |  |
|                            | Tomakin                               | CEA                                  |                                | 537                    | -                                  | -                        | 537                    | 0                        | 70                                | -            | -             | 0       | -     | -                        | 70                               | -                           | 70                       | 537                     | 13                                       | 467                          | -             | -    | 15                         | 24                         | 23                          | 22                          | 4             | -            | - |  |
|                            | Tuross Heads                          | IEA                                  |                                | 177                    | -                                  | -                        | 177                    | 0                        | 15                                | 0            | 0             | 1       | 0     | 0                        | 16                               | 0                           | 16                       | 177                     | 9  | -                            | -             | 161  | 5                          | 8                          | 9                           | 10                          | 3             | -            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 3,477                  | -                                  | 0                        | 3,477                  | 0                        | 223                               | 0            | 0             | 20      | 0     | 0                        | 243                              | 0                           | 243                      | 3,477                   | 7  | 2,763                        | 310           | 161  | 93                         | 130                        | 170                         | 162                         | 53            | -            | - |  |
| Forbes Shire Council       | Forbes                                | IEA                                  |                                | 663                    | -                                  | 0                        | 663                    | 0                        | 0                                 | 0            | 0             | 9       | 0     | 0                        | 9                                | 0                           | 9                        | 602                     | 1  | 0                            | 54            | 467  | 20                         | 21                         | 27                          | 29                          | 10            | 190          | - |  |
| Gilgandra Shire Council    | Gilgandra                             | TF                                   |                                | 238                    | -                                  | 0                        | 238                    | 0                        | 0                                 | 238          | 0             | 0       | 0     | 0                        | 238                              | 0                           | 238                      | 238                     | 100                                      | 0                            | 0             | 0    | -                          | -                          | -                           | -                           | 2             | 23           | - |  |
| Glen Innes Severn Shire    | Deepwater                             | AN                                   |                                | 20                     | -                                  | 0                        | 20                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 20                      | 0  | 0                            | 20            | 0    | 0.6                        | 0.6                        | 0.6                         | 0.6                         | 0.1           | 1            | - |  |
|                            | Glen Innes                            | IEA                                  |                                | 506                    | -                                  | 0                        | 506                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 506                     | 0  | 0                            | 506           | 0    | 13                         | 15                         | 26                          | 30                          | 14            | 150          | - |  |
|                            | Total/Weighted Average                |                                      |                                | 526                    | -                                  | 0                        | 526                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 526                     | 0  | 0                            | 526           | 0    | 14                         | 16                         | 27                          | 31                          | 14            | 151          | - |  |
| Gosford City Council       | Kincumber                             | C                                    |                                | 13,644                 | -                                  | 0                        | 13,644                 | 0                        | 13                                | 0            | 0             | 0       | 0     | 0                        | 13                               | 0                           | 13                       | 13,632                  | 0  | 13,619                       | -             | 0    | 388                        | 439                        | 717                         | 833                         | 155           | 1,795        | - |  |
|                            | Woy Woy                               | CEA                                  |                                | 5,792                  | -                                  | 0                        | 5,792                  | 0                        | 0                                 | 0            | 0             | 0       | 6     | 0                        | 6                                | -                           | 6                        | 5,792                   | 0  | 5,786                        | -             | 0    | 179                        | 185                        | 260                         | 268                         | 28            | 323          | - |  |
|                            | Total/Weighted Average                |                                      |                                | 19,436                 | -                                  | 0                        | 19,436                 | 0                        | 13                                | 0            | 0             | 0       | 6     | 0                        | 19                               | 0                           | 19                       | 19,424                  | 0  | 19,405                       | 0             | 0    | 567                        | 623                        | 978                         | 1,101                       | 183           | 2,118        | - |  |
| Goulburn Mulwaree Council  | Goulburn                              | TF                                   |                                | 1,933                  | -                                  | 0                        | 1,933                  | 0                        | 194                               | 1,612        | 0             | 0       | 0     | 0                        | 1,806                            | 0                           | 1,806                    | 1,933                   | 93                                       | 0                            | 44            | 0    | 45                         | 45                         | 81                          | 81                          | 32            | 600          | - |  |
|                            | Marulan                               | A                                    |                                | 0                      | -                                  | 0                        | 0                      | 0                        | 0                                 | -            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 0                       | 0  | 0                            | 0             | 0    | -                          | -                          | -                           | -                           | -             | -            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 1,933                  | -                                  | 0                        | 1,933                  | 0                        | 194                               | 1,612        | 0             | 0       | 0     | 0                        | 1,806                            | 0                           | 1,806                    | 1,933                   | 93                                       | 0                            | 44            | 0    | 45                         | 45                         | 81                          | 81                          | 32            | 600          | - |  |
| Greater Hume Shire Council | Holbrook                              | TF                                   |                                | 128                    | -                                  | 0                        | 128                    | 0                        | 13                                | 0            | 0             | 0       | 0     | 0                        | 13                               | 0                           | 13                       | 128                     | 10                                       | 0                            | 116           | 0    | 4                          | 6                          | 5                           | 5                           | 0.8           | 19           | - |  |
|                            | Jindera                               | A                                    |                                | 88                     | -                                  | 0                        | 88                     | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 88                      | 0  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            | - |  |
|                            | Henty                                 | IEA                                  |                                | 62                     | -                                  | 0                        | 62                     | 0                        | 26                                | 0            | 0             | 0       | 0     | 0                        | 26                               | 0                           | 26                       | 62                      | 41                                       | 0                            | 0             | 36   | 2                          | 2                          | 4                           | 4                           | 0.5           | 30           | - |  |
|                            | Culcairn                              | IEA                                  |                                | 85                     | -                                  | 0                        | 85                     | -                        | 14                                | 0            | 0             | 0       | 0     | 0                        | 14                               | 0                           | 14                       | 85                      | 16                                       | 0                            | 0             | 71   | 3                          | 4                          | 4                           | 4                           | 0.5           | 20           | - |  |
|                            | Walla Walla                           | IEA                                  |                                | 41                     | -                                  | 0                        | 41                     | 0                        | 9                                 | 0            | 0             | 0       | 0     | 0                        | 9                                | 0                           | 9                        | 41                      | 21                                       | 0                            | 32            | 0    | 1.3                        | 1.4                        | 1.9                         | 2.0                         | 0.3           | 24           | - |  |
|                            | Burrumbuttock                         | CED                                  |                                | 2                      | -                                  | 0                        | 2                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 2                       | 0  | 0                            | 0             | 2    | 0.1                        | 0.1                        | 0.4                         | 0.4                         | 0.1           | 1            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 406                    | -                                  | 0                        | 406                    | 0                        | 61                                | 0            | 0             | 0       | 0     | 0                        | 61                               | 0                           | 61                       | 406                     | 15                                       | 0                            | 148           | 110  | 10                         | 13                         | 15                          | 16                          | 2             | 94           | - |  |
| Griffith City Council      | Griffith                              | MBR                                  |                                | 2,040                  | -                                  | 0                        | 2,040                  | 0                        | 0                                 | 0            | 0             | 158     | 0     | 0                        | 158                              | 0                           | 158                      | 2,007                   | 8  | 0                            | 1,670         | 384  | 63                         | 63                         | 102                         | 102                         | 259           | 369          | - |  |
|                            | Yenda                                 | AL                                   |                                | 74                     | -                                  | 0                        | 74                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 74                      | 0  | 0                            | 47            | 0    | 2                          | 2                          | 5                           | 5                           | 0.3           | 12           | - |  |
|                            | Bilbul                                | A                                    |                                | 9                      | -                                  | -                        | 9                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 9                       | 0  | 0                            | 0             | 9    | 0.3                        | 0.3                        | 0.6                         | 0.6                         | 33            | 0.4          | - |  |
|                            | Total/Weighted Average                |                                      |                                | 2,123                  | -                                  | 0                        | 2,123                  | 0                        | 0                                 | 0            | 0             | 158     | 0     | 0                        | 158                              | 0                           | 158                      | 2,090                   | 8  | 0                            | 1,717         | 393  | 66                         | 66                         | 107                         | 107                         | 292           | 382          | - |  |
| Gundagai Shire Council     | Gundagai                              | TF                                   |                                | -                      | -                                  | -                        | 0                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 234                      | 0                       | -  | -                            | -             | -    | -                          | -                          | -                           | -                           | -             | -            | - |  |
| Gunnedah Shire Council     | Gunnedah                              | TF                                   |                                | 724                    | -                                  | 0                        | 724                    | 0                        | 0                                 | 603          | 0             | 0       | 0     | 0                        | 603                              | 0                           | 603                      | 603                     | 100                                      | 0                            | 0             | 603  | 15                         | 19                         | 39                          | 44                          | 7             | 50           | - |  |
|                            | Curlewis                              | A                                    |                                | 29                     | -                                  | 0                        | 29                     | 0                        | 0                                 | -            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 28                      | 0  | 0                            | 0             | 0    | -                          | -                          | -                           | -                           | -             | -            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 753                    | -                                  | 0                        | 753                    | 0                        | 0                                 | 603          | 0             | 0       | 0     | 0                        | 603                              | 0                           | 603                      | 631                     | 96                                       | 0                            | 0             | 603  | 15                         | 19                         | 39                          | 44                          | 7             | 50           | - |  |
| Guyra Shire Council        | Guyra                                 | CEA                                  |                                | 186                    | -                                  | 0                        | 186                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 186                     | 0  | 0                            | 186           | 0    | 4                          | 4                          | 6                           | 6                           | 5             | 38           | - |  |
|                            | Tingha                                | CED                                  |                                | 28                     | -                                  | 0                        | 28                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 28                      | 0  | 0                            | 28            | 0    | 1.0                        | 1.0                        | 1.0                         | 1.0                         | 0.4           | 1.0          | - |  |
|                            | Total/Weighted Average                |                                      |                                | 214                    | -                                  | 0                        | 214                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 214                     | 0  | 0                            | 214           | 0    | 5                          | 5                          | 7                           | 7                           | 5             | 39           | - |  |
| Gwydir Shire Council       | Bingara                               | TF                                   |                                | 108                    | -                                  | 0                        | 108                    | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | -                           | 0                        | 108                     | 0  | 0                            | 0             | 108  | 3                          | 4                          | 8                           | 10                          | 0.6           | 20           | - |  |
|                            | Warialda                              | TF                                   |                                | 142                    | -                                  | 0                        | 142                    | -                        | 20                                | -            | -             | -       | -     | -                        | 20                               | -                           | 20                       | 142                     | 14                                       | -                            | 11            | 111  | 6                          | 10                         | 15                          | 15                          | 0.7           | 25           | - |  |
|                            | Total/Weighted Average                |                                      |                                | 250                    | -                                  | 0                        | 250                    | 0                        | 20                                | 0            | 0             | 0       | 0     | 0                        | 20                               | 0                           | 20                       | 250                     | 8  | 0                            | 11            | 219  | 9                          | 14                         | 23                          | 25                          | 1.3           | 45           | - |  |
| Harden Shire Council       | Harden Murrumburrah                   | TF                                   |                                | 89                     | -                                  | 0                        | 89                     | 0                        | 34                                | 0            | 0             | 0       | 0     | 0                        | 34                               | 0                           | 34                       | 255                     | 13                                       | 0                            | 45            | 0    | 0.5                        | 0.5                        | 1.0                         | 1.0                         | 0.1           | 1.0          | - |  |
| Port Macquarie-Hastings    | Port Macquarie                        | IEA                                  |                                | 5,551                  | -                                  | 0                        | 5,551                  | 0                        | 184                               | 0            | 0             | 0       | 0     | 0                        | 184                              | 0                           | 184                      | 5,551                   | 3  | 0                            | 5,367         | 0    | 160                        | -                          | -                           | -                           | 43            | -            | - |  |
|                            | Camden Haven (Dunbogan)               | MBR                                  |                                | 893                    | -                                  | 0                        | 893                    | 0                        | 0                                 | 0            | 0             | 3       | 0     | 0                        | 3                                | 0                           | 3                        | 893                     | 0  | 890                          | 0             | 0    | 23                         | -                          | -                           | -                           | 14            | -            | - |  |
|                            | Wauchope                              | IEA                                  |                                | 795                    | -                                  | 0                        | 795                    | 0                        | 80                                | 0            | 0             | 2       | 0     | 0                        | 82                               | 0                           | 82                       | 795                     | 10                                       | 0                            | 713           | 0    | 22                         | -                          | -                           | -                           | 21            | -            | - |  |
|                            | Lake Cathie/Bonny Hills               | CEA                                  |                                | 496                    | -                                  | 0                        | 496                    | 0                        | 0                                 | 0            | 0             | 2       | 0     | 0                        | 2                                | 0                           | 2                        | 496                     | 0  | 0                            | 0             | 494  | 11                         | -                          | -                           | -                           | 5             | -            | - |  |
|                            | Kew/Kendall                           | IEA                                  |                                | 115                    | -                                  | 0                        | 115                    | 0                        | 35                                | 80           | 0             | 0       | 0     | 0                        | 115                              | 0                           | 115                      | 115                     | 100                                      | 0                            | 0             | 0    | 4                          | -                          | -                           | -                           | 3             | -            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 7,850                  | -                                  | 0                        | 7,850                  | 0                        | 299                               | 80           | 0             | 7       | 0     | 0                        | 386                              | 0                           | 386                      | 7,850                   | 5  | 890                          | 6,080         | 494  | 220                        | -                          | -                           | -                           | 85            | -            | - |  |
|                            | Total/Weighted Average                |                                      |                                | 818                    | -                                  | 0                        | 818                    | -                        | -                                 | 153          | 0             | 0       | 0     | 0                        | -                                | 0                           | 0                        | 764                     | 0  | 0                            | 425           | 0    | 21                         | 21                         | 51                          | 51                          | 16            | 189          | - |  |
| Hawkesbury City Council    | South Windsor                         | CEA                                  |                                | 1,553                  | -                                  | 0                        | 1,553                  | 0                        | 18                                | 0            | 0             | 0       | 0     | 0                        | 18                               | 0                           | 18                       | 1,158                   | 2  | 0                            | 1,140         | 0    | 33                         | 33                         | 84                          | 84                          | 9             | 103          | - |  |
|                            | Total/Weighted Average                |                                      |                                | 2,371                  | -                                  | 0                        | 2,371                  | 0                        | 18                                | 153          | 0             | 0       | 0     | 0                        | 18                               | 0                           | 171                      | 1,922                   | 9  | 0                            | 1,565         | 0    | 54                         | 54                         | 135                         | 135                         | 25            | 292          | - |  |
|                            | Hay                                   | TF                                   |                                | 282                    | -                                  | 0                        | 282                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 277                     | 0  | 0                            | 0             | 277  | 29                         | 29                         | 32                          | 32                          | 10            | 35           | - |  |



## APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility                  | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |         |       |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |                            |                             | Flows                       |               |              |     |     |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|--------------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|--------------|---------------|---------|-------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|-----|-----|-----|-----|-----|-----|-------|-----|-----|----------------|---------------------|-------|-----|-------|---------------|------|
|                                |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site | Other | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Av. Dry weather - Perm Pop   | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |     |     |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              | W20 | W21 | W22 | W23 | W24 | W25 | W25.1 | W26 | W15 | W26 + W15 - W6 | W18.4 - Evaporation | W18.5 | W27 | Ocean | River - Creek | Land |
|                                |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              |     |     |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| 1                              | 2                                     | 3                                    | 4                              | 5                      | 6                                  | 7                        | 8                      | 9                        | 10                                | 11           | 12            | 13      | 14    | 15                       | 16                               | 18                          | 19                       | 20                      | 21                                       | 22                           | 23                         | L/s                         | L/s                         | L/s           | L/s          | L/s | L/s |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Inverell Shire Council         | Inverell                              | IEA                                  |                                | 840                    |                                    | 0                        | 840                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 680                     | 0  | 0                            | 680                        | 0                           | 150                         | 150           | 150          | 150 | 17  | 200 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Ashford                               | IEA                                  |                                | 35                     |                                    | 0                        | 35                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 35                      | 0  | 0                            | 35                         | 0                           | 1.0                         | 1.0           | 1.0          | 1.0 | 0.2 | 2.0 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Delungra                              | IEA                                  |                                | 20                     |                                    | 0                        | 20                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 20                      | 0  | 0                            | 20                         | 0                           | 0.5                         | 0.5           | 0.5          | 0.5 | 0.2 | 1.0 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Gilgai                                | A                                    |                                | 30                     |                                    | 0                        | 30                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 30                      | 0  | 0                            | 30                         | 0                           | 1.0                         | 1.0           | 1.0          | 1.0 | 0.1 | 2.0 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 925                    |                                    | 0                        | 925                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 0                        | 765                     | 0  | 0                            | 765                        | 0                           | 153                         | 153           | 153          | 153 | 18  | 205 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Jerilderie Shire Council       | Jerilderie                            | A                                    |                                | 77                     |                                    | 0                        | 77                     | 0                        | 50                                | 0            | 0             | 0       | 0     | 0                        | 50                               | 0                           | 50                       | 77                      | 65                                       | 0                            | 0                          | 0                           | 2.4                         | 3             | 6            | 6   | 1.2 | 5   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Junee Shire Council            | Junee                                 | TF                                   |                                | 379                    | -                                  | -                        | 379                    | -                        | 147                               | -            | -             | -       | -     | -                        | 147                              | -                           | 147                      | 367                     | 40                                       | -                            | 92                         | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Kempsey Shire Council          | Kempsey West                          | TF                                   |                                | 913                    |                                    | 0                        | 913                    | 0                        | 7                                 | 7            | 0             | 0       | 0     | 0                        | 14                               | 0                           | 14                       | 1,169                   | 1  | 0                            | 1,169                      | 0                           | 37                          | 39            | 140          | 114 | 15  | 174 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | South West Rocks                      | IEA                                  |                                | 496                    |                                    | 0                        | 496                    | 0                        | 3                                 | 0            | 0             | 0       | 0     | 0                        | 3                                | 0                           | 3                        | 496                     | 1  | 0                            | 0                          | 497                         | 14                          | 16            | 21           | 29  | 4   | 48  |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Kempsey South                         | TF                                   |                                | 475                    |                                    | 0                        | 475                    | 0                        | 39                                | 0            | 0             | 0       | 0     | 0                        | 39                               | 0                           | 39                       | 474                     | 8  | 0                            | 232                        | 0                           | 8                           | 7             | 11           | 9   | 11  | 129 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Crescent Head                         | IEA                                  |                                | 143                    |                                    | 0                        | 143                    | 0                        | 0                                 | 0            | 0             | 5       | 0     | 0                        | 5                                | 0                           | 5                        | 143                     | 3  | 143                          | 0                          | 0                           | 4                           | 5             | 6            | 8   | 1.8 | 21  |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Smithtown/Gladstone                   | IEA                                  |                                | 159                    |                                    | 0                        | 159                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 159                      | 0                       | 0  | 160                          | 0                          | 4                           | 5                           | 10            | 9            | 2.0 | 23  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Frederickton                          | IEA                                  |                                | 61                     |                                    | 0                        | 61                     | 0                        | 11                                | 5            | 0             | 0       | 0     | 0                        | 15                               | 0                           | 15                       | 76                      | 20                                       | 0                            | 61                         | 0                           | 2.0                         | 2.3           | 11           | 7   | 1.3 | 15  |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Hat Head                              | IEA                                  |                                | 36                     |                                    | 0                        | 36                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 40                       | 0                       | 0  | 0                            | 40                         | 1.1                         | 2.1                         | 3             | 4            | 0.3 | 4   |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 2,283                  |                                    | 0                        | 2,283                  | 0                        | 60                                | 12           | 0             | 5       | 0     | 0                        | 77                               | 0                           | 77                       | 2,558                   | 3  | 143                          | 1,621                      | 537                         | 70                          | 77            | 202          | 179 | 36  | 415 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Kyogle Council                        | Kyogle                               | TF                             |                        | 341                                |                          | 0                      | 341                      | -                                 | 25           | -             | -       | -     | -                        | -                                | 25                          | -                        | 25                      | 341                                      | 7                            | -                          | 316                         | -                           | 6             | 6            | 7   | 7   | 11  | 108 |     |     |       |     |     |                |                     |       |     |       |               |      |
| Bonalbo                        |                                       | IEA                                  |                                | 36                     |                                    | -                        | 36                     | -                        | 33                                | -            | -             | -       | -     | -                        | 33                               | -                           | 33                       | 36                      | 92                                       | -                            | 3                          | 0                           | 0.6                         | 0.6           | 0.9          | 0.9 | 1.2 | 12  |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Woodenbong                     |                                       | IEA                                  |                                | 47                     |                                    | 0                        | 47                     | 0                        | 22                                | 0            | 0             | 0       | 0     | 0                        | 22                               | 0                           | 22                       | 47                      | 47                                       | -                            | 25                         | -                           | 0.6                         | 0.6           | 0.7          | 0.7 | 1.5 | 18  |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Total/Weighted Average         |                                       |                                      |                                | 424                    |                                    | 0                        | 424                    | 0                        | 80                                | 0            | 0             | 0       | 0     | 0                        | 80                               | 0                           | 80                       | 424                     | 19                                       | 0                            | 344                        | 0                           | 7                           | 7             | 9            | 9   | 14  | 138 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Lachlan Shire Council          | Condobolin                            | TF                                   |                                | -                      |                                    | -                        | 0                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 0                        | -                       | -  | -                            | -                          | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Tottenham                             | 0                                    |                                | -                      |                                    | -                        | 0                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 0                        | -                       | -  | -                            | -                          | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Lake Cargelligo                       | 0                                    |                                | -                      |                                    | -                        | 0                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 0                        | -                       | -  | -                            | -                          | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 0                      |                                    | 0                        | 0                      | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | -                                | 0                           | 116                      | 0                       | -  | 0                            | 0                          | 0                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Leeton Shire Council           | Leeton                                | TF                                   |                                | 742                    |                                    | 0                        | 742                    | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 742                      | 0                       | 0  | 0                            | 339                        | 30                          | 36                          | 45            | 54           | 5   | 160 |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Yanco                                 | IEA                                  |                                | 69                     |                                    | 0                        | 69                     | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 69                       | 0                       | 0  | 25                           | 20                         | 2.0                         | 3                           | 3             | 3            | 1.0 | 15  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Whitton                               | A                                    |                                | 20                     |                                    | 0                        | 20                     | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 20                       | 0                       | 0  | 0                            | 0                          | 1.0                         | 1.0                         | 2.0           | 2.0          | 0.2 | 5   |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 831                    |                                    | 0                        | 831                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | -                                | 0                           | 0                        | 831                     | 0  | 0                            | 25                         | 359                         | 33                          | 40            | 50           | 59  | 6   | 180 |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Lismore City Council           | Lismore East                          | IEA                                  |                                | 2,472                  |                                    | 0                        | 2,472                  | 0                        | 0                                 | 0            | 0             | 5       | 0     | 0                        | 5                                | 0                           | 5                        | 2,284                   | 0  | 0                            | 2,124                      | 0                           | 60                          | 60            | 218          | 218 | 28  | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Lismore South                         | TF                                   |                                | 1,449                  |                                    | 0                        | 1,449                  | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 1,549                    | 0                       | 0  | 1,240                        | 0                          | 31                          | 31                          | 161           | 161          | 28  | 238 |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Nimbin                                | IEA                                  |                                | 87                     |                                    | 0                        | 87                     | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 87                       | 0                       | 0  | 87                           | 0                          | 1.3                         | 1.3                         | 4             | 4            | 0.3 | 75  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 4,008                  |                                    | 0                        | 4,008                  | 0                        | 0                                 | 0            | 0             | 5       | 0     | 0                        | 5                                | 0                           | 3,920                    | 0                       | 0  | 3,451                        | 0                          | 92                          | 92                          | 383           | 383          | 56  | 313 |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Lithgow City Council           | Lithgow                               | IEA                                  |                                | 1,780                  |                                    | 0                        | 1,780                  | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 1,780                    | 0                       | 0  | 1,780                        | 0                          | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Portland                              | TF                                   |                                | 218                    |                                    | 0                        | 218                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 218                      | 0                       | 0  | 218                          | 0                          | -                           | -                           | -             | -            | -   | -   | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Wallerawang                           | IEA                                  |                                | 144                    |                                    | 0                        | 144                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 144                      | 0                       | 0  | 144                          | 0                          | -                           | -                           | -             | -            | -   | 0.9 | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 2,142                  |                                    | 0                        | 2,142                  | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 2,142                    | 0                       | 0  | 2,142                        | 0                          | -                           | -                           | -             | -            | -   | 0.9 | -   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Liverpool Plains Shire Council | Quirindi                              | TF                                   |                                | 145                    |                                    | 0                        | 145                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 145                      | 0                       | 0  | 145                          | 0                          | 10                          | 11                          | 10            | 18           | 2   | 22  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Werris Creek                          | TF                                   |                                | 122                    |                                    | 0                        | 122                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 122                      | 0                       | 0  | 122                          | 0                          | 3                           | 6                           | 7             | 8            | 1.2 | 39  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 267                    |                                    | 0                        | 267                    | 0                        | 0                                 | 0            | 0             | 0       | 0     | 0                        | 0                                | 0                           | 267                      | 0                       | 0  | 267                          | 0                          | 13                          | 17                          | 17            | 26           | 3   | 61  |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
| Lockhart Shire Council         | Lockhart                              | TF                                   |                                | 74                     |                                    | -                        | 74                     | -                        | 2                                 | -            | -             | -       | -     | -                        | 2                                | -                           | 2                        | 74                      | 3  | -                            | -                          | 71                          | 2.3                         | 2.3           | 4            | 4   | 0.6 | 7   |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | The Rock                              | C                                    |                                | 46                     |                                    | -                        | 46                     | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 46                       | 0                       | -  | -                            | 46                         | 1.5                         | 1.5                         | 4             | 4            | 0   | 4   |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Yerong Creek                          | A                                    |                                | 5                      |                                    | 5                        | 5                      | -                        | -                                 | -            | -             | -       | -     | -                        | -                                | 0                           | 0                        | -                       | -  | -                            | 5                          | 0.2                         | 0.2                         | 0.2           | 0.2          | -   | 0   |     |     |     |     |       |     |     |                |                     |       |     |       |               |      |
|                                | Total/Weighted Average                |                                      |                                | 124                    |                                    | 5                        | 124                    | 0                        | 2                                 | 0            | 0             | 0       | 0     | 0                        | 2                                | 0                           | 2                        | 120                     | 2  | 0                            | 0                          | 122                         | 4                           | 4             | 8            | 8   | 1   | 11  |     |     |     |       |     |     |                |                     |       |     |       |               |      |

APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |         |       |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |               |      | Flows                      |                            |                             |                             |               |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|               |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site | Other | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Ocean                        | River - Creek | Land | Av. Dry weather - Perm Pop | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |         |       |                          |                                  |                             |                          |                         |  |                              |               |      |                            |                            |                             |                             |               |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility             | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |              |               |           |           |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |                            |                             | Flows                       |               |              |                     |                                    |                |
|---------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|--------------|---------------|-----------|-----------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|---------------------|------------------------------------|----------------|
|                           |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural | Environmental | On-Site   | Other     | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Av. Dry weather - Perm Pop   | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |                     |                                    |                |
|                           |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |              |               |           |           |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              | W18.4 = W18 - W18.1 | W26 = W20, W21, W22, W23, W24, W25 | W26 + W15 - W6 |
|                           | 1                                     | 2                                    | W18.3 ML 3                     | W18 ML 4               | W18.1 ML 5                         | ML 6                     | W18.4 ML 7             | W20 ML 8                 | W21 ML 9                          | W22 ML 10    | W23 ML 11     | W24 ML 12 | W25 ML 13 | W25.1 ML 14              | W26 ML 15                        | W15 ML 16                   | ML 18                    | W18.5 ML 19             | W27 ML 20                                | ML 21                        | ML 22                      | ML 23                       | L/s                         | L/s           | L/s          | L/s                 | L/s                                | L/s            |
| Palerang Council          | Braidwood                             | IEA                                  |                                | 113                    |                                    | 0                        | 113                    | 0                        | 0                                 | 0            | 0             | 15        | 0         | 0                        | 15                               | 0                           | 15                       | 113                     | 13                                       | 0                            | 98                         | 0                           | 4                           | 4             | 10           | 10                  | 1.8                                | 35             |
|                           | Bungendore                            | IEA                                  |                                | 214                    |                                    | 0                        | 214                    | 0                        | 30                                | 0            | 0             | 12        | 28        | 0                        | 70                               | 0                           | 70                       | 214                     | 33                                       | 0                            | 144                        | 0                           | 10                          | 10            | 22           | 22                  | 2.1                                | 100            |
|                           | Captains Flat                         | IEA                                  |                                | 46                     |                                    | 0                        | 46                     | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 46                      | 0  | 0                            | 46                         | 0                           | 1.3                         | 1             | 4            | 4                   | 1.2                                | 15             |
|                           | Total/Weighted Average                |                                      |                                | 373                    |                                    | 0                        | 373                    | 0                        | 30                                | 0            | 0             | 27        | 28        | 0                        | 85                               | 0                           | 85                       | 373                     | 23                                       | 0                            | 288                        | 0                           | 15                          | 15            | 36           | 36                  | 5                                  | 150            |
| Parkes Shire Council      | Parkes                                | TF                                   |                                | 716                    |                                    | 0                        | 716                    | 0                        | 170                               | 0            | 0             | 0         | 0         | 0                        | 170                              | 0                           | 170                      | 716                     | 24                                       | 0                            | 300                        | 0                           | 23                          | 25            | 46           | 50                  | 3                                  | 140            |
|                           | Tullamore                             | A                                    |                                | 12                     |                                    | 0                        | 12                     | 0                        | 2                                 | 0            | 0             | 0         | 0         | 0                        | 2                                | 0                           | 2                        | 0                       |  | 0                            | 0                          | 12                          | 0.5                         | -             | -            | -                   | -                                  | -              |
|                           | Trundle                               | A                                    |                                | 0                      |                                    | 0                        | 0                      | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 0                       |  | 0                            | 0                          | -                           | 1.0                         | -             | -            | -                   | -                                  | -              |
|                           | Peak Hill                             | TF                                   |                                | 111                    |                                    | 0                        | 111                    | 0                        | -                                 | 0            | 0             | 0         | 0         | 0                        | -                                | 0                           | 0                        | 110                     | 0  | 0                            | 0                          | 90                          | 4                           | 4             | 5            | 5                   | 1.0                                | 9              |
| Queanbeyan City Council   | Total/Weighted Average                |                                      |                                | 839                    |                                    | 0                        | 839                    | 0                        | 172                               | 0            | 0             | 0         | 0         | 0                        | 172                              | 0                           | 172                      | 826                     | 21                                       | 0                            | 300                        | 102                         | 29                          | 29            | 51           | 55                  | 4                                  | 149            |
|                           | Queanbeyan                            | TF                                   |                                | 3,675                  |                                    | 0                        | 3,675                  | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        | 0                                | 0                           | 0                        | 3,675                   | 0  | 0                            | 3,293                      | 123                         | 211                         | 211           | 284          | 284                 | 29                                 | 851            |
|                           | Casino                                | TF                                   |                                | 1,110                  |                                    | -                        | 1,110                  | -                        | 3                                 | 407          | -             | -         | -         | -                        | 410                              | -                           | 410                      | 1,110                   | 37                                       | -                            | 700                        | -                           | 29                          | 29            | 53           | 53                  | 27                                 | 308            |
|                           | Evans Head                            | IEA                                  |                                | 579                    |                                    | -                        | 579                    | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 579                     | 0  | -                            | 579                        | -                           | 15                          | 16            | 24           | 20                  | 5                                  | 61             |
| Richmond Valley Council   | Coraki                                | TF                                   |                                | 125                    |                                    | -                        | 125                    | -                        | 10                                | -            | -             | -         | -         | -                        | 10                               | -                           | 10                       | 125                     | 8  | -                            | 115                        | -                           | 3                           | 3             | 7            | 7                   | 3                                  | 34             |
|                           | Rileys Hill                           | CEA                                  |                                | 7                      |                                    | -                        | 7                      | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 7                       | 0  | -                            | 7                          | -                           | 0.2                         | 0.2           | 0.3          | 0.3                 | 0.5                                | 0.5            |
|                           | Total/Weighted Average                |                                      |                                | 1,821                  |                                    | 0                        | 1,821                  | 0                        | 13                                | 407          | 0             | 0         | 0         | 0                        | 420                              | 0                           | 420                      | 1,821                   | 23                                       | 0                            | 1,401                      | 0                           | 48                          | 48            | 84           | 80                  | 35                                 | 403            |
|                           | Bendalong                             | IEA                                  |                                | 133                    |                                    | 0                        | 133                    | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 86                      | 0  | 0                            | 86                         | 0                           | 2.1                         | 7             | 69           | 69                  | 1.6                                | 65             |
| Shoalhaven City Council   | Nowra                                 | TF                                   |                                | 2,407                  |                                    | 0                        | 2,407                  | 0                        | 28                                | 4            | 0             | 0         | 0         | 0                        | 32                               | 0                           | 32                       | 2,199                   | 1  | 0                            | 2,167                      | 0                           | 56                          | 59            | 164          | 193                 | 18                                 | 283            |
|                           | St Georges Basin                      | IEA                                  |                                | 1,397                  |                                    | 0                        | 1,397                  | 0                        | 50                                | 658          | 0             | 0         | 0         | 0                        | 708                              | 0                           | 708                      | 1,305                   | 54                                       | 597                          | 0                          | 0                           | 34                          | 42            | 180          | 212                 | 18                                 | 301            |
|                           | Vincentia                             | IEA                                  |                                | 705                    |                                    | 0                        | 705                    | 0                        | 22                                | 287          | 0             | 0         | 0         | 0                        | 309                              | 0                           | 309                      | 561                     | 55                                       | 252                          | 0                          | 0                           | 18                          | 29            | 242          | 264                 | 9                                  | 311            |
|                           | Bomaderry                             | TF                                   |                                | 947                    |                                    | 0                        | 947                    | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 849                     | 0  | 0                            | 849                        | 0                           | 22                          | 24            | 110          | 163                 | 11                                 | 291            |
|                           | Milton Ulladulla                      | IEA                                  |                                | 1,411                  |                                    | 0                        | 1,411                  | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 1,312                   | 0  | 1,312                        | 0                          | 0                           | 35                          | 58            | 178          | 228                 | 14                                 | 244            |
|                           | Culburra                              | IEA                                  |                                | 768                    |                                    | 0                        | 768                    | 0                        | 23                                | 305          | 0             | 0         | 0         | 0                        | 328                              | 0                           | 328                      | 597                     | 55                                       | 269                          | 0                          | 0                           | 18                          | 25            | 115          | 144                 | 7                                  | 194            |
|                           | Sussex Inlet                          | IEA                                  |                                | 539                    |                                    | 0                        | 539                    | 0                        | 6                                 | 0            | 0             | 0         | 0         | 0                        | 6                                | 0                           | 6                        | 511                     | 1  | 0                            | 0                          | 505                         | 14                          | 23            | 112          | 143                 | 7                                  | 193            |
|                           | Callala                               | IEA                                  |                                | 325                    |                                    | 0                        | 325                    | 0                        | 11                                | 149          | 0             | 0         | 0         | 0                        | 160                              | 0                           | 160                      | 291                     | 55                                       | 131                          | 0                          | 0                           | 8                           | 16            | 134          | 164                 | 5                                  | 210            |
|                           | Conjola                               | IEA                                  |                                | 104                    |                                    | 0                        | 104                    | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 84                      | 0  | 0                            | 0                          | 84                          | 3                           | 6             | 27           | 29                  | 1.0                                | 47             |
|                           | Shoalhaven Heads                      | IEA                                  |                                | 266                    |                                    | 0                        | 266                    | 0                        | 38                                | 68           | 0             | 0         | 0         | 0                        | 106                              | 0                           | 106                      | 233                     | 45                                       | 0                            | 0                          | 127                         | 7                           | 12            | 76           | 101                 | 1.5                                | 98             |
|                           | Berry                                 | IEA                                  |                                | 320                    |                                    | 0                        | 320                    | 0                        | 0                                 | 20           | 0             | 0         | 0         | 0                        | 20                               | 0                           | 20                       | 230                     | 9  | 0                            | 210                        | 0                           | 6                           | 7             | 56           | 57                  | 5                                  | 97             |
|                           | Kangaroo Valley                       | MBR                                  |                                | 67                     |                                    | 0                        | 67                     | 0                        | 0                                 | 36           | 0             | 0         | 0         | 0                        | 36                               | 0                           | 36                       | 40                      | 92                                       | 0                            | 0                          | 0                           | 1.3                         | 2.3           | 1.9          | 3                   | 0.6                                | 10             |
|                           | Total/Weighted Average                |                                      |                                | 9,387                  |                                    | 0                        | 9,387                  | 0                        | 178                               | 1,527        | 0             | 0         | 0         | 0                        | 1,705                            | 0                           | 1,705                    | 8,298                   | 21                                       | 2,561                        | 3,226                      | 802                         | 224                         | 310           | 1,465        | 1,770               | 98                                 | 2,344          |
| Singleton Council         | Singleton                             | IEA                                  |                                | 1,126                  |                                    | 0                        | 1,126                  | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        | 0                                | 0                           | 0                        | 1,126                   | 0  | 0                            | 1,126                      | 0                           | 31                          | 31            | 245          | 245                 | 28                                 | 536            |
| Snowy River Shire Council | Jindabyne                             | IEA                                  |                                | 336                    |                                    | 0                        | 336                    | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 336                     | 0  | 0                            | 455                        | 0                           | -                           | -             | -            | -                   | -                                  | -              |
|                           | Berridale                             | IEA                                  |                                | 142                    |                                    | 0                        | 142                    | -                        | 39                                | -            | -             | -         | -         | -                        | 39                               | -                           | 39                       | 142                     | 27                                       | -                            | 79                         | 39                          | -                           | -             | -            | -                   | -                                  | -              |
|                           | Adaminaby                             | TF                                   |                                | 28                     |                                    | 0                        | 28                     | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 28                      | 0  | 0                            | -                          | 0                           | -                           | -             | -            | -                   | -                                  | -              |
|                           | Interlaken                            | IEA                                  |                                | 10                     |                                    | -                        | 10                     | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 10                      | 0  | -                            | -                          | -                           | -                           | -             | -            | -                   | -                                  | -              |
| Tamworth Regional Council | Total/Weighted Average                |                                      |                                | 516                    |                                    | 0                        | 516                    | 0                        | 39                                | 0            | 0             | 0         | 0         | 0                        | 39                               | 0                           | 39                       | 516                     | 8  | 0                            | 534                        | 39                          | -                           | -             | -            | -                   | -                                  | -              |
|                           | Tamworth (Westdale)                   | TF                                   |                                | 4,844                  |                                    | 0                        | 4,844                  | 0                        | 0                                 | 3,913        | 0             | -         | 0         | 0                        | 3,913                            | 0                           | 3,913                    | 4,844                   | 81                                       | 0                            | 0                          | 0                           | 159                         | 162           | 630          | 630                 | 56                                 | 1,000          |
|                           | Manilla                               | TF                                   |                                | 173                    |                                    | 0                        | 173                    | 0                        | 0                                 | 173          | 0             | 0         | 0         | 0                        | 173                              | 0                           | 173                      | 173                     | 100                                      | 0                            | 0                          | 0                           | 5                           | 5             | 7            | 7                   | 1.3                                | 16             |
|                           | Kootingal                             | A                                    |                                | 75                     |                                    | 0                        | 75                     | 0                        | 0                                 | 75           | 0             | 0         | 0         | 0                        | 75                               | 0                           | 75                       | 75                      | 100                                      | 0                            | 0                          | 0                           | 2.3                         | 2.3           | 6            | 6                   | 0.5                                | 6              |
| Temora Shire Council      | Barraba                               | TF                                   |                                | 117                    |                                    | 0                        | 117                    | 0                        | 0                                 | 117          | 0             | 0         | 0         | 0                        | 117                              | 0                           | 117                      | 117                     | 100                                      | 0                            | 0                          | 0                           | 3                           | 3             | 8            | 8                   | 1.4                                | 16             |
|                           | Total/Weighted Average                |                                      |                                | 5,209                  |                                    | 0                        | 5,209                  | 0                        | 0                                 | 4,278        | 0             | 0         | 0         | 0                        | 4,278                            | 0                           | 4,278                    | 5,209                   | 82                                       | 0                            | 0                          | 0                           | 169                         | 172           | 650          | 650                 | 59                                 | 1,037          |
|                           | Temora                                | AL                                   |                                | 326                    |                                    | 0                        | 326                    | 0                        | 99                                | 0            | 0             | 0         | 0         | 0                        | 99                               | 0                           | 99                       | 326                     | 30                                       | 0                            | 66                         | 161                         | 10                          | 10            | 10           | 12                  | 2.3                                | 27             |
|                           | Tenterfield                           | IEA                                  |                                | 272                    |                                    | 0                        | 272                    | 0                        | 44                                | 0            | 0             | 0         | 0         | 0                        | 44                               | 0                           | 44                       | 272                     | 16                                       | 0                            | 147                        | 0                           | 8                           | 8             | 13           | 13                  | 3                                  | 29             |
| Tumbarumba Shire Council  | Urbenville                            | IEA                                  |                                | 16                     |                                    | 0                        | 16                     | -                        | -                                 | -            | -             | -         | -         | -                        | -                                | -                           | 0                        | 16                      | 0  | 0                            | 16                         | 0                           | 0.2                         | 0.2           | 0.2          | 3                   | -                                  | -              |
|                           | Total/Weighted Average                |                                      |                                | 288                    |                                    | 0                        | 288                    | 0                        | 44                                | 0            | 0             | 0         | 0         | 0                        | 44                               | 0                           | 44                       | 288                     | 15                                       | 0                            | 163                        | 0                           | 8                           | 8             | 13           | 16                  | 3                                  | 29             |
|                           | Khancoban                             | TF                                   |                                | 54                     |                                    | -                        | 54                     | 0                        | 0                                 | 0            | 0             | 0         | 0         | 0                        |                                  | 0                           | 0                        | 54                      | 0  | -                            | -                          |                             |                             |               |              |                     |                                    |                |



APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility              | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW                  | Recycled Sewage Effluent |                                   |                 |                 |                 |                 |                          |                                  |                             |                            | Treated Sewage Effluent                  | Percent treated sewage effluent recycled    | Volume Effluent Disposed W29 |                            |                             | Flows                       |               |              |       |     |       |     |
|----------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|---|--------------------------|-----------------------------------|-----------------|-----------------|-----------------|-----------------|--------------------------|----------------------------------|-----------------------------|----------------------------|--|---|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|-------|-----|-------|-----|
|                            |                                       |                                      |                                |                        |                                    |                          |   | Residential              | Commercial, Industrial, Municipal | Agricultural    | Environmental   | On-Site         | Other           | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent   |  |   | Av. Dry weather - Perm Pop   | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |       |     |       |     |
|                            |                                       |                                      |                                |                        |                                    |                          |   |                          |                                   |                 |                 |                 |                 |                          |                                  |                             |                            |  |   |                              |                            |                             |                             |               |              |       |     |       |     |
|                            |                                       |                                      | W18.3<br>ML<br>3               | W18<br>ML<br>4         | W18.1<br>ML<br>5                   | ML<br>6                  | W18.4 = W18 - W18.1<br>W18.4<br>ML<br>7 | W20<br>ML<br>8           | W21<br>ML<br>9                    | W22<br>ML<br>10 | W23<br>ML<br>11 | W24<br>ML<br>12 | W25<br>ML<br>13 | W25.1<br>ML<br>14        | W26<br>ML<br>15                  | W15<br>ML<br>16             | W26 + W15 - W6<br>ML<br>18 | W18.4 - Evaporation<br>W18.5<br>ML<br>19 | (W26 + W15 - W6) / W18.5<br>W27<br>ML<br>20 | ML<br>21                     | River - Creek<br>ML<br>22  | Land<br>ML<br>23            | L/s                         | L/s           | L/s          | L/s   | L/s | L/s   |     |
| Tweed Shire Council        | Banora Point                          | BNR                                  |                                | 4,378                  |                                    | 0                        | 4,378                                   | 0                        | 159                               | 0               | 0               | 1               | 0               | 0                        | 160                              | 0                           | 160                        | 4,378                                    | 4   | 0                            | 4,218                      | 0                           | 115                         | 99            | 1,237        | 641   | 56  | 1,237 |     |
|                            | Murwillumbah                          | TF                                   |                                | 1,493                  |                                    | 0                        | 1,493                                   | 0                        | 301                               | 0               | 0               | 0               | 0               | 0                        | 301                              | 0                           | 301                        | 1,395                                    | 22  | 0                            | 1,093                      | 0                           | 37                          | 29            | 178          | 136   | 22  | 178   |     |
|                            | Kingscliff                            | BNR                                  |                                | 1,104                  |                                    | 0                        | 1,104                                   | 0                        | 40                                | 0               | 0               | 0               | 0               | 0                        | 40                               | 0                           | 40                         | 1,100                                    | 4   | 0                            | 1,059                      | 0                           | 33                          | 35            | 188          | 177   | 7   | 188   |     |
|                            | Hastings Point                        | IEA                                  |                                | 1,017                  |                                    | 0                        | 1,017                                   | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 1,018                                    | 0   | 0                            | 0                          | 1,018                       | 27                          | 28            | 218          | 177   | 7   | 218   |     |
|                            | Tumbulgum                             | IEA                                  |                                | 45                     |                                    | 0                        | 45                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 45                                       | 0   | 0                            | 44                         | 0                           | 1.2                         | 1.6           | 9            | 6     | 0.6 | 9     |     |
|                            | Tyalgum                               | IEA                                  |                                | 20                     |                                    | 0                        | 20                                      | 0                        | 0                                 | 27              | 0               | 0               | 0               | 0                        | 27                               | 0                           | 27                         | 27                                       | 100   | 0                            | 0                          | 0                           | 0.7                         | 0.5           | 1.2          | 0.6   | 0.4 | 1.2   |     |
|                            | Uki                                   | CEA                                  |                                | 21                     |                                    | 0                        | 21                                      | 0                        | 0                                 | 23              | 0               | 0               | 0               | 0                        | 23                               | 0                           | 23                         | 23                                       | 100   | 0                            | 0                          | 0                           | 0.6                         | 0.7           | 0.8          | 0.8   | 0.5 | 0.8   |     |
|                            | Burringbar/Mooball                    | IEA                                  |                                | 26                     |                                    | 0                        | 26                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 26                                       | 0   | 0                            | 26                         | 0                           | 0.7                         | 0.8           | 1.0          | 0.8   | 0.9 | 1.0   |     |
|                            | Total/Weighted Average                |                                      |                                | 8,105                  |                                    | 0                        | 8,105                                   | 0                        | 500                               | 49              | 0               | 2               | 0               | 0                        | 551                              | 0                           | 551                        | 8,011                                    | 7   | 0                            | 6,441                      | 1,018                       | 215                         | 195           | 1,833        | 1,139 | 94  | 1,833 |     |
| Upper Hunter Shire Council | Scone                                 | TF                                   |                                | 587                    |                                    | 0                        | 587                                     | 0                        | 125                               | 0               | 0               | 1               | 0               | 0                        | 126                              | 0                           | 126                        | 587                                      | 21  | 0                            | 195                        | -                           | 20                          | 23            | 33           | 35    | 7   | -     |     |
|                            | Aberdeen                              | IEA                                  |                                | 178                    |                                    | 0                        | 178                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 178                                      | 0   | 0                            | 155                        | 0                           | 6                           | 7             | 11           | 13    | 1.5 | -     |     |
|                            | Merriwa                               | TF                                   |                                | 65                     |                                    | 0                        | 65                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 65                                       | 0   | 0                            | 52                         | -                           | 3                           | 3             | 8            | 9     | 0.8 | -     |     |
|                            | Murrurundi                            | IEA                                  |                                | 70                     |                                    | 0                        | 70                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 70                                       | 0   | 0                            | 60                         | 0                           | 2.3                         | 5             | 8            | 10    | 1.1 | 38    |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 900                                |                          | 0                                       | 900                      | 0                                 | 125             | 0               | 0               | 1               | 0                        | 0                                | 126                         | 0                          | 126                                      | 900   | 14                           | 0                          | 462                         | 0                           | 31            | 37           | 60    | 66  | 10    | 38  |
| Upper Lachlan Council      | Crookwell                             | TF                                   |                                | 433                    |                                    | 0                        | 433                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 433                                      | 0   | 0                            | 433                        | 0                           | 6                           | 6             | 8            | 8     | 3   | 80    |     |
|                            | Taralga                               | IEA                                  |                                | 50                     |                                    | 0                        | 50                                      | 0                        | 0                                 | 50              | 0               | 0               | 0               | 0                        | 50                               | 0                           | 50                         | 50                                       | 100   | 0                            | 0                          | 50                          | 2.0                         | 2.0           | 3            | 3     | 0.3 | 5     |     |
|                            | Gunning                               | IEA                                  |                                | 60                     |                                    | 0                        | 60                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 60                                       | 0   | 0                            | 60                         | 0                           | 2.0                         | 2.0           | 3            | 3     | 0.2 | 5     |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 543                                |                          | 0                                       | 543                      | 0                                 | 0               | 50              | 0               | 0               | 0                        | 0                                | 50                          | 0                          | 50                                       | 543   | 9                            | 0                          | 493                         | 50                          | 10            | 10           | 14    | 14  | 4     | 90  |
| Uralla Shire Council       | Uralla                                | CEA                                  |                                | 131                    |                                    | 0                        | 131                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 131                                      | 0   | 0                            | 131                        | 0                           | 4                           | 4             | 5            | 5     | 0.8 | 44    |     |
| Urana Shire Council        | Urana                                 | A                                    |                                | 55                     |                                    | 0                        | 55                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 55                                       | 0   | 0                            | 0                          | 0                           | 25                          | 25            | 25           | 25    | 0.0 | 25    |     |
|                            | Oaklands                              | A                                    |                                | 35                     |                                    | 0                        | 35                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 35                                       | 0   | 0                            | 0                          | 0                           | 25                          | 25            | 25           | 25    | 0.0 | 25    |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 90                                 |                          | 0                                       | 90                       | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 90                                       | 0   | 0                            | 0                          | 0                           | 50                          | 50            | 50           | 50    | 0.1 | 50    |     |
| Wagga Wagga City Council   | Wagga (Narrung St)                    | IEA                                  |                                | 4,015                  |                                    | 0                        | 4,015                                   | 0                        | 147                               | 0               | 3,860           | 8               | 0               | 0                        | 4,015                            | 0                           | 4,015                      | 4,015                                    | 100   | 0                            | 0                          | 0                           | 127                         | 125           | 154          | 133   | 17  | 361   |     |
|                            | Wagga (Koorngal)                      | IEA                                  |                                | 1,358                  |                                    | 0                        | 1,358                                   | 0                        | 102                               | 0               | 1,256           | 0               | 0               | 0                        | 1,358                            | 0                           | 1,358                      | 1,358                                    | 100   | 0                            | 0                          | 0                           | 43                          | 43            | 65           | 45    | 7   | 247   |     |
|                            | Collingullie                          | A                                    |                                | 9                      |                                    | 0                        | 9                                       | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 9  | 0   | 0                            | 0                          | 9                           | -                           | -             | -            | -     | -   | -     |     |
|                            | Forest Hill                           | IEA                                  |                                | 247                    |                                    | 0                        | 247                                     | 0                        | 0                                 | 247             | 0               | 0               | 0               | 0                        | 247                              | 0                           | 247                        | 247                                      | 100   | 0                            | 0                          | 0                           | 8                           | 8             | 10           | 9     | 1.4 | 16    |     |
|                            | Uranquinty                            | A                                    |                                | 138                    |                                    | 0                        | 138                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 138                                      | 0   | 0                            | 0                          | 138                         | 4                           | 4             | 8            | 6     | 0.9 | 24    |     |
|                            | Tarcutta                              | A                                    |                                | 55                     |                                    | 0                        | 55                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 55                                       | 0   | 0                            | 0                          | 55                          | 1.4                         | 1.7           | 4            | 2.1   | 0.8 | 20    |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 5,822                              |                          | 0                                       | 5,822                    | 0                                 | 249             | 247             | 5,116           | 8               | 0                        | 0                                | 5,620                       | 0                          | 5,620                                    | 5,822                                       | 97                           | 0                          | 0                           | 202                         | 183           | 182          | 241   | 195 | 27    | 668 |
| Wakool Shire Council       | Barham                                | TF                                   |                                | 95                     |                                    | 0                        | 95                                      | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 95                                       | 0   | 0                            | 0                          | 95                          | -                           | -             | -            | -     | -   | -     |     |
|                            | Moulamein                             | IEA                                  |                                | 20                     |                                    | 0                        | 20                                      | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 20                                       | 0   | 0                            | 0                          | 20                          | -                           | -             | -            | -     | -   | -     |     |
|                            | Wakool                                | A                                    |                                | 0                      |                                    | -                        | 0                                       | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 0  | -   | -                            | -                          | -                           | -                           | -             | -            | -     | -   | -     |     |
|                            | Murray Downs                          | BNR                                  |                                | 81                     |                                    | -                        | 81                                      | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 81                                       | 0   | 0                            | 0                          | 80                          | -                           | -             | -            | -     | -   | -     |     |
|                            | Tooleybuc                             | A                                    |                                | 147                    |                                    | -                        | 147                                     | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 146                                      | 0   | -                            | -                          | 146                         | -                           | -             | -            | -     | -   | -     |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 343                                |                          | 0                                       | 343                      | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | -                           | 0                          | 0  | 342   | 0                            | 0                          | 0                           | 341                         | -             | -            | -     | -   | -     | -   |
| Walcha Council             | Walcha                                | TF                                   |                                | 0                      |                                    | -                        | 0                                       | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 0  | -   | -                            | -                          | -                           | -                           | -             | -            | -     | -   | -     |     |
| Walgett Shire Council      | Walgett                               | TF                                   |                                | 290                    |                                    | -                        | 290                                     | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 290                                      | 0   | -                            | -                          | 290                         | -                           | -             | -            | -     | -   | -     | -   |
|                            | Lightning Ridge                       | CED                                  |                                | 0                      |                                    | -                        | 0                                       | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 0  | -   | -                            | -                          | -                           | -                           | -             | -            | -     | -   | -     |     |
|                            | Collarenebri                          | CED                                  |                                | 0                      |                                    | -                        | 0                                       | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                          | 0  | -   | -                            | -                          | -                           | -                           | -             | -            | -     | -   | -     |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 290                                |                          | 0                                       | 290                      | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | -                           | 0                          | 0  | 290   | 0                            | 0                          | 0                           | 290                         | -             | -            | -     | -   | -     | -   |
| Warren Shire Council       | Warren                                | TF                                   |                                | 165                    |                                    | 0                        | 165                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 169                                      | 0   | 0                            | 0                          | 169                         | 15                          | 15            | 17           | 17    | 0.5 | 25    |     |
|                            | Nevertire                             | A                                    |                                | 11                     |                                    | 0                        | 11                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 11                                       | 0   | 0                            | 0                          | 0                           | 0.3                         | 0.3           | 0.5          | 0.5   | 0.5 | 40    |     |
|                            |                                       | Total/Weighted Average               |                                |                        | 176                                |                          | 0                                       | 176                      | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 0  | 180   | 0                            | 0                          | 0                           | 169                         | 15            | 15           | 18    | 18  | 1.0   | 65  |
| Warrumbungle Shire Council | Coonabarabran                         | TF                                   |                                | 180                    |                                    | 0                        | 180                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 180                                      | 0   | 0                            | 76                         | 0                           | 5                           | 5             | 20           | 20    | 1.1 | 13    |     |
|                            | Coolah                                | C                                    |                                | 59                     |                                    | 0                        | 59                                      | 0                        | 0                                 | 59              | 0               | 0               | 0               | 0                        | 59                               | 0                           | 59                         | 59                                       | 100   | -                            | -                          | -                           | 1.7                         | 1.7           | 3            | 3     | 0.9 | 4     |     |
|                            | Baradine                              | A                                    |                                | 50                     |                                    | 0                        | 50                                      | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 50                                       | 0   | 0                            | 0                          | 13                          | -                           | -             | -            | -     | -   | -     |     |
|                            |                                       | Dunedoo                              | IEA                            |                        | 66                                 |                          | 0                                       | 66                       | 0                                 | 0               | 0               | 0               | 0               | 0                        |                                  | 0                           | 0                          | 66                                       | 0   | 0                            | 66                         | 0                           | -                           | -             | -            | -     | -   | -     |     |
|                            | Total/Weighted Average                |                                      |                                | 355                    |                                    | 0                        | 355                                     | 0                        | 0                                 | 59              | 0               | 0               | 0               | 0                        | 59                               | 0                           | 59                         | 355                                      | 17  | 0                            | 142                        | 13                          | 7                           | 7             | 22           | 22    | 2.0 | 17    |     |
| Weddin Shire Council       | Grenfell                              | TF                                   |                                | 165                    |                                    | 0                        | 165                                     | 0                        | 12                                | 0               | 0               | 0               | 0               | 0                        | 12                               | 0                           | 12                         | 170                                      | 7   | 0                            | 143                        | 12                          | 5                           | 6             | 6            | 7     | 2.0 | 17    |     |
| Wellington Council         | Wellington                            | IEA                                  |                                | 531                    |                                    | -                        | 531                                     | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                          | 531                                      | 0   | 0                            | 383                        | 0                           | 15                          | -             | 19           | -     | 2.2 | 26    |     |

APPENDIX D4: 2014-15 RECYCLING PERFORMANCE

| Water Utility               | Sewage Treatment Works <sup>1,6</sup> | Type of Treatment Works <sup>4</sup> | Sewage taken from sewer mining | Total Sewage Collected | Sewage supplied to other utilities | Sewage with no treatment | Sewage at inlet to STW | Recycled Sewage Effluent |                                   |                 |                 |                 |                 |                          |                                  |                             |                          | Treated Sewage Effluent | Percent treated sewage effluent recycled | Volume Effluent Disposed W29 |                            |                             | Flows                       |               |              |                     |                                    |                |
|-----------------------------|---------------------------------------|--------------------------------------|--------------------------------|------------------------|------------------------------------|--------------------------|------------------------|--------------------------|-----------------------------------|-----------------|-----------------|-----------------|-----------------|--------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------|--|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------|--------------|---------------------|------------------------------------|----------------|
|                             |                                       |                                      |                                |                        |                                    |                          |                        | Residential              | Commercial, Industrial, Municipal | Agricultural    | Environmental   | On-Site         | Other           | Managed Aquifer Recharge | Total Recycled Effluent Supplied | Bulk Recycled Water Exports | Recycled Sewage Effluent |                         |  | Av. Dry weather - Perm Pop   | Av. Dry weather - Peak Pop | Peak Dry weather - Perm Pop | Peak Dry weather - Peak Pop | Flow max 24hr | Flow max 1hr |                     |                                    |                |
|                             |                                       |                                      |                                |                        |                                    |                          |                        |                          |                                   |                 |                 |                 |                 |                          |                                  |                             |                          |                         |  |                              |                            |                             |                             |               |              | W18.4 = W18 - W18.1 | W26 = W20, W21, W22, W23, W24, W25 | W26 + W15 - W6 |
|                             |                                       |                                      | W18.3<br>ML<br>3               | W18<br>ML<br>4         | W18.1<br>ML<br>5                   | ML<br>6                  | W18.4<br>ML<br>7       | W20<br>ML<br>8           | W21<br>ML<br>9                    | W22<br>ML<br>10 | W23<br>ML<br>11 | W24<br>ML<br>12 | W25<br>ML<br>13 | W25.1<br>ML<br>14        | W26<br>ML<br>15                  | W15<br>ML<br>16             | ML<br>18                 | W18.5<br>ML<br>19       | W27<br>ML<br>20                          | ML<br>21                     | ML<br>22                   | ML<br>23                    | L/s                         | L/s           | L/s          | L/s                 | L/s                                | L/s            |
| Wentworth Shire Council     | Buronga Gol Gol                       | A                                    |                                | 180                    |                                    | -                        | 180                    | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                        | 180                     | 0  | -                            | -                          | 180                         | -                           | -             | -            | -                   | -                                  | -              |
|                             | Wentworth                             | TF                                   |                                | 80                     |                                    | -                        | 80                     | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                        | 80                      | 0  | -                            | -                          | 80                          | -                           | -             | -            | -                   | -                                  | -              |
|                             | Dareton                               | TF                                   |                                | 36                     |                                    | -                        | 36                     | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                        | 36                      | 0  | -                            | -                          | 36                          | -                           | -             | -            | -                   | -                                  | -              |
|                             | Namatjira                             | A                                    |                                | 25                     |                                    | -                        | 25                     | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                        | 25                      | 0  | -                            | -                          | 25                          | -                           | -             | -            | -                   | -                                  | -              |
|                             | Wentworth (East)                      | A                                    |                                | 7                      |                                    | -                        | 7                      | -                        | -                                 | -               | -               | -               | -               | -                        | -                                | -                           | 0                        | 7                       | 0  | -                            | -                          | 7                           | -                           | -             | -            | -                   | -                                  | -              |
|                             | Total/Weighted Average                |                                      |                                | 328                    |                                    | 0                        | 328                    | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | -                           | 0                        | 0                       | 328                                      | 0                            | 0                          | 0                           | 328                         | -             | -            | -                   | -                                  | -              |
| Wingecarribee Shire Council | Mittagong                             | CEA                                  |                                | 1,276                  |                                    | 0                        | 1,276                  | 0                        | 0                                 | 40              | 0               | 1               | 0               | 0                        | 42                               | 0                           | 42                       | 1,273                   | 3  | 0                            | 1,231                      | 42                          | 28                          | 32            | 39           | 41                  | 18                                 | 207            |
|                             | Bowral                                | IEA                                  |                                | 1,803                  |                                    | 0                        | 1,803                  | 0                        | 0                                 | 17              | 0               | 1               | 0               | 0                        | 18                               | 0                           | 18                       | 1,803                   | 1  | 0                            | 1,786                      | -                           | 34                          | 46            | 46           | 89                  | 15                                 | 170            |
|                             | Moss Vale                             | IEA                                  |                                | 1,371                  |                                    | 0                        | 1,371                  | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | -                                | 0                           | 0                        | 1,371                   | 0  | 0                            | 1,371                      | 0                           | 27                          | 35            | 64           | 84                  | 25                                 | 1,018          |
|                             | Bundanoon                             | CEA                                  |                                | 397                    |                                    | 0                        | 397                    | 0                        | 0                                 | 11              | 0               | 1               | 0               | 0                        | 12                               | 0                           | 12                       | 397                     | 3  | 0                            | 385                        | 11                          | 8                           | 9             | 11           | 12                  | 10                                 | 114            |
|                             | Berrima                               | IEA                                  |                                | 145                    |                                    | 0                        | 145                    | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | -                                | 0                           | 0                        | 142                     | 0  | 0                            | 142                        | 0                           | 2.3                         | 3             | 5            | 14                  | 3                                  | 39             |
|                             | Robertson                             | MBR                                  |                                | 208                    |                                    | 0                        | 208                    | 0                        | 0                                 | 91              | 0               | 0               | 0               | 0                        | 91                               | 0                           | 91                       | 208                     | 44                                       | 0                            | 0                          | 0                           | 1.7                         | 2.4           | 3            | 3                   | 1.2                                | 14             |
| Wyong Water                 | Total/Weighted Average                |                                      |                                | 5,202                  |                                    | 0                        | 5,202                  | 0                        | 0                                 | 160             | 0               | 4               | 0               | 0                        | 163                              | 0                           | 163                      | 5,194                   | 3  | 0                            | 4,914                      | 53                          | 102                         | 126           | 168          | 244                 | 72                                 | 1,562          |
|                             | Bateau Bay                            | TF                                   |                                | 3,278                  |                                    | 0                        | 3,278                  | 0                        | 205                               | -               | -               | 163             | -               | -                        | 368                              | -                           | 368                      | 3,278                   | 11                                       | 2,910                        | -                          | -                           | 104                         | -             | -            | -                   | 40                                 | -              |
|                             | Wyong South                           | IEA                                  |                                | 5,568                  |                                    | 0                        | 5,568                  | -                        | -                                 | -               | -               | 18              | -               | -                        | -                                | -                           | 0                        | 5,568                   | 0  | 5,569                        | -                          | -                           | 176                         | -             | -            | -                   | 59                                 | -              |
|                             | Charmhaven                            | IEA                                  |                                | 3,146                  |                                    | 0                        | 3,146                  | -                        | -                                 | -               | -               | 21              | -               | -                        | -                                | -                           | 0                        | 3,146                   | 0  | 3,146                        | -                          | -                           | 99                          | -             | -            | -                   | 34                                 | -              |
|                             | Toukley                               | TF                                   |                                | 2,778                  |                                    | 0                        | 2,778                  | 0                        | 316                               | 0               | 0               | 31              | 0               | 0                        | 347                              | 0                           | 347                      | 2,778                   | 12                                       | 2,778                        | -                          | -                           | 88                          | -             | -            | -                   | 30                                 | -              |
|                             | Gwandalan                             | IEA                                  |                                | 370                    |                                    | 0                        | 370                    | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | -                                | 0                           | 0                        | 370                     | 0  | 370                          | -                          | -                           | 1.0                         | -             | -            | -                   | 12                                 | -              |
| Yass Valley Council         | Mannering Park                        | IEA                                  |                                | 911                    |                                    | 0                        | 911                    | -                        | -                                 | -               | -               | 5               | -               | -                        | -                                | -                           | 0                        | 911                     | 0  | 911                          | -                          | -                           | 29                          | -             | -            | -                   | 9                                  | -              |
|                             | Total/Weighted Average                |                                      |                                | 16,051                 |                                    | 0                        | 16,051                 | 0                        | 521                               | 0               | 0               | 238             | 0               | 0                        | 715                              | 0                           | 759                      | 16,051                  | 5  | 15,684                       | 0                          | 0                           | 497                         | -             | -            | -                   | 184                                | -              |
|                             | Yass                                  | IEA                                  |                                | 474                    |                                    | 3                        | 474                    | 0                        | 0                                 | 0               | 0               | 0               | 0               | 0                        | 0                                | 0                           | 0                        | 474                     | 0  | 0                            | 474                        | 0                           | 16                          | 18            | 50           | 60                  | 4                                  | 95             |
| Young Shire Council         | Young (New)                           | IEA                                  |                                | 549                    |                                    | -                        | 549                    | 0                        | 176                               | 0               | 0               | 4               | 0               | 0                        | 180                              | 0                           | 180                      | 552                     | 33                                       | 0                            | 376                        | 0                           | 16                          | 20            | 77           | 82                  | 3                                  | 103            |
|                             | Total/Weighted Average                |                                      |                                | 549                    |                                    | -                        | 549                    | 0                        | 176                               | 0               | 0               | 4               | 0               | 0                        | 180                              | 0                           | 180                      | 552                     | 33                                       | 0                            | 376                        | 0                           | 16                          | 20            | 77           | 82                  | 3                                  | 103            |

## APPENDIX E: CIRCULAR LWU 18 OF JUNE 2014 – ASSURING THE SAFETY OF WATER SUPPLY DISTRIBUTION SYSTEMS



Department of  
Primary Industries  
Office of Water

WS14/109

Circular No. LWU 18  
Date 4 June 2014  
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### Assuring the safety of drinking water supplies

This Circular has been prepared to advise NSW local water utilities (LWUs) of an important new protocol for assuring the safety of all drinking water supplies in regional NSW. The protocol is robust and cost-effective and must be implemented by all LWUs providing a drinking water supply.

#### Protocol

Following its review of a number of recent boil water alerts<sup>1</sup> in regional NSW, DPI Water, in consultation with NSW Health and the NSW Water Directorate, has developed the new protocol, which is set out in Attachment 2 – Appendix E of the *2012-13 NSW Water Supply and Sewerage Benchmarking Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Appendix E documents the minimum requirements for ensuring each potable water supply is safe from microbial contamination. Under this protocol, each LWU will need to ensure that the **standard operating procedures (SOP)** for its water supply systems meet these requirements in order to achieve the following three key barriers:

**Barrier 1 – Effective disinfection** to kill, inactivate or remove pathogens in the water supply prior to distribution.

**Barrier 2 – Ensure distribution system integrity** to prevent contamination.

**Barrier 3 – Maintain free chlorine residual** in the water in the distribution system to help protect against minor contamination and as an indicator of a potential breach in distribution system integrity.

Together, these 3 barriers operate to assure the safety of each water supply and to prevent microbial contamination.

The *Public Health Act (2010)* requires each LWU to develop and implement a risk based Drinking Water Management System in accordance with the *NSW Guidelines for Drinking Water Management Systems*, NSW Health and NSW Office of Water, 2013. Activities related to disinfection and distribution system integrity should be clearly defined in each water utility's Drinking Water Management System, in accordance with the above Appendix E.

<sup>1</sup> Attachment 1 is a copy of page 10 of the 2014-15 NSW Water Supply and Sewerage Benchmarking Report which provides examples of recent failures of integrity of water supply distribution systems.



Once a water supply is effectively disinfected (Barrier 1), enteric pathogens should not reappear within the distribution system, unless there is a failure of the integrity of the distribution system. Maintaining the integrity of the distribution system (Barrier 2) is therefore the most important barrier to prevent contamination of a disinfected water supply. To verify and maintain integrity of all its distribution systems, each LWU must carry out the actions identified in section E3 of Appendix E as a matter of priority within **the next 12 months**. These actions include the following and need to be repeated at frequencies appropriate for each system, but no less than every **four (4) years**.

Carry out a careful and **detailed examination** of each service reservoir to ensure:

- (1) the reservoir and its roof are secured from entry by birds, animals, vermin and windborne contaminants;
- (2) rainwater cannot enter into the reservoir (i.e., no leaking roof or holes in the reservoir wall or gaps around the openings on the roof);
- (3) roof is adequately drained especially near the openings and landings. The roof should extend beyond the reservoir wall;
- (4) all inspection hatches are closed and locked at all times; and
- (5) the reservoir site and roof are secured from unauthorised access.

Where reservoir cleaning has been a routine activity for a water utility, reports from past cleaning episodes should be reviewed to find any reservoir integrity problems that have been identified but not corrected. Recent reports from experienced reservoir cleaners may satisfy the requirement for a detailed examination. Any deficiency in the roof or mesh design will need to be rectified by the LWU following such examination.

### Action

Each LWU will need to extend the standard operating procedures (SOP) for its water supply systems to meet the minimum requirements in Appendix E (Attachment 2) and to carry out the actions in section E3 of Appendix E within the next 12 months in order to ensure the integrity of its distribution systems and the safety of its water supplies.

### Reporting

Each LWU will need to complete the attached Summary Report (Attachment 3) following its detailed examination of the integrity of each of its water supply distribution systems in accordance with Appendix E (Attachment 2).

Further information on this matter is available from DPI Water by contacting Mr Bill Ho, Manager Water and Sewerage on 9842 8495 or [bill.ho@dpi.nsw.gov.au](mailto:bill.ho@dpi.nsw.gov.au).

Yours sincerely



**Michael Bullen**

**A/Deputy Director General, Water**

Encl. Attachments:

- (1) Copy of page 10 of 2014-15 NSW Benchmarking Report
- (2) Appendix E - Effective disinfection of a potable water supply and assuring integrity of the distribution system to prevent contamination of the supply
- (3) Summary Report – Distribution System Integrity

## Attachment 1

## Examples of Failure of Integrity of Distribution Systems

**Photo 1** shows the **hatch** of a 20m high service reservoir, which has inadvertently been **left open** for a few weeks. The result was repeat detections of *E. coli* in the reticulated water supply and the need to issue a boil water alert.



Photo 1 - Service reservoir hatch left open

**Photos 2 and 3** are underwater photos in the above service reservoir showing evidence of contamination by birds - **bird eggs & dead birds**.

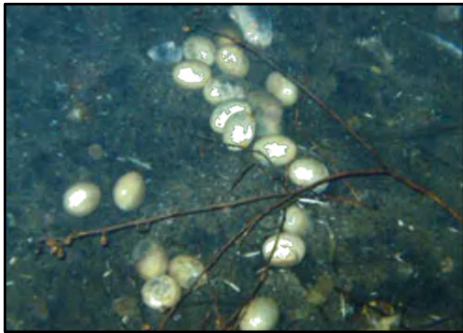


Photo 2 - Bird eggs in reservoir

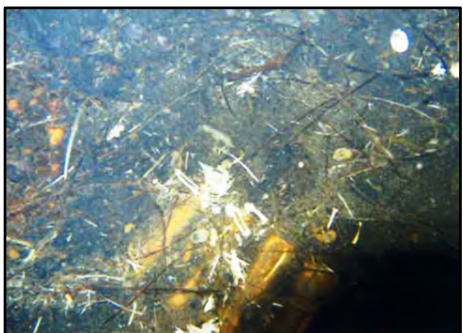


Photo 3 - Dead birds in reservoir

**Photo 4** is a service reservoir where the **mesh openings** are **too large** and the roof design is deficient, allowing the entry of small birds, rainwater and windblown material to contaminate the stored water. The reservoir roof needs to be modified so that roof runoff and windblown material cannot contaminate the stored water. **Photo 5** shows mesh openings that are also too large,

allowing entry of vermin, such as wasps and windblown material.



Photo 4 – Deficient reservoir roof design



Photo 5 - Large mesh openings on reservoir

The continued detection of *E. coli* in reticulated water supplies and boil water alerts in 2012 and 2013 have highlighted the need for a strategic approach for assuring the integrity of the distribution system to prevent contamination of a water supply that has been effectively disinfected. The recommended approach in Appendix E on page 305 was developed by DPI Water and NSW Health in consultation with the NSW Water Directorate and LWUs to provide a robust basis for assuring the safety of a water supply. As noted in the box on page 10, each LWU needs to review its present standard operating procedures (SOP) to ensure they address the minimum requirements in Appendix E for achieving safe water supplies:

Barrier 1 – **Effective disinfection** to kill, inactivate or remove pathogens in the water supply prior to distribution.

Barrier 2 – Ensure **distribution system integrity** to prevent contamination.

Barrier 3 – **Maintain free chlorine residual** in the water in the distribution system where practicable, to help protect against minor contamination and as an indicator of a potential breach in distribution system integrity.

## Attachment 2

## Effective disinfection of a potable water supply and assuring integrity of the distribution system to prevent contamination of the supply

### E1 Overview

This appendix highlights the key requirements for ensuring the effective disinfection<sup>22</sup> and assuring the safety of a potable water supply. Each NSW Local Water Utility (LWU) needs to ensure that the **standard operating procedures (SOP)** for its water supply systems **meet** these minimum requirements, in order to achieve the following three key barriers:

**Barrier 1 – Effective disinfection** to kill, inactivate or remove pathogens in the water supply prior to distribution.

**Barrier 2 – Ensure distribution system integrity** to prevent contamination.

**Barrier 3 – Maintain free chlorine residual** in the water in the distribution system to help protect against minor contamination and as an indicator of a potential breach in distribution system integrity.

Guiding principle 1 of the *Australian Drinking Water Guidelines* (below<sup>1</sup>) highlights the risks to consumers from pathogenic organisms and the paramount importance of protecting water sources and water treatment.

For **free chlorine** disinfection, **Figure 1** on page 314 shows how the above 3 barriers work together to provide a safe water supply.

In addition, as indicated in the *2014-15 NSW Water Supply and Sewerage Benchmarking Report* (page 9) each utility has now developed and needs to implement a risk based Drinking Water Management System in accordance with the *NSW Guidelines for Drinking Water Management Systems*, NSW Health and NSW Office of Water, 2013. These systems should include reference to sound standard operating procedures (SOP) in accordance with this Appendix and are required from 1 September 2014 under the *Public Health Act 2010*. Activities related to disinfection and distribution system integrity need to be clearly defined in each water utility's Drinking Water Management System (DWMS).

The *NSW Guidelines for Drinking Water Management Systems* is based on the Framework for the Management of Drinking Water Quality outlined in the *2011 Australian Drinking Water Guidelines* (ADWG) to assure the safety and quality of the water supplied to the consumers.

Effective disinfection of the source water and ensuring the integrity of the distribution system with or without a residual disinfectant are separate barriers (ADWG and above).

**Effective disinfection** of a water supply is essential to kill, inactivate or remove any pathogens in the water supply prior to distribution (Barrier 1 above). This could be achieved through a number of disinfection systems. Disinfection is a **critical control point** and must be appropriately monitored (ADWG).

**Preventing ingress of contaminants** at vulnerable points within the distribution system is a key **system integrity** barrier (Barrier 2 above) and **maintaining a residual disinfectant**<sup>23</sup> throughout the distribution

<sup>22</sup> Guiding principles 1 to 6 in Chapter 1 of the 2011 ADWG are listed below to provide an overall context to this Appendix:

- The greatest risks to consumers of drinking water are pathogenic microorganisms. Protection of water sources and treatment are of paramount importance and must never be compromised.
- The drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply.
- Any sudden or extreme change in water quality, flow or environmental conditions (e.g. extreme rainfall or flooding) should arouse suspicion that drinking water might become contaminated.
- System operators must be able to respond quickly and effectively to adverse monitoring signals.
- System operators must maintain a personal sense of responsibility and dedication to providing consumers with safe water, and should never ignore a consumer complaint about water quality.
- Ensuring drinking water safety and quality requires the application of a considered risk management approach.

<sup>23</sup> Refer to page 186 of ADWG (Version 2.0, December 2013), under 'managing water supplies with no disinfection residual'.



system is another barrier (Barrier 3 above). Together, the 3 barriers operate to assure the safety of each water supply. A sound verification monitoring program<sup>24</sup> is needed to assure that these three barriers<sup>25</sup> are functioning effectively. The monitoring frequency for each water supply system is dependent on its key characteristics identified through analysis and should be reviewed as part of a comprehensive risk assessment. The guidance in the following sections E2, E3 and E4 provides the minimum requirements for each barrier for inclusion in each LWU's standard operating procedures (SOP) for its water supply systems. Following risk assessment for its systems, a LWU may include additional requirements in its SOP where warranted.

Service reservoir integrity is a Critical Control Point for disinfected water supply and should be appropriately monitored (section E3).

## E2 Barrier 1 – Effective Disinfection

Disinfection is the single process that has had the greatest impact on drinking water safety. In Australia the common disinfection systems used include chlorination, chloramination, ultraviolet irradiation and ozonation. The advantages and disadvantages for each of these systems are discussed in detail in ADWG.

When chlorination is used, a source water is effectively disinfected when the required C.t values have been achieved (ADWG 2013, page 186). However, the C.t values used in the design of chlorine disinfection systems in Australia are generally higher than those required for effective disinfection (ADWG and WHO general recommendation is 0.5 mg/L of free chlorine residual after 30 minutes). The C.t values can be achieved by adjusting the chlorine dose or the contact time to provide a minimum C.t value of 15 mg/L/minute. The LWU should check the adequacy of this for its system.

To achieve effective disinfection of a water supply with **free chlorine**, monitoring of the following parameters prior to the distribution of the water should be included in your LWU's SOP as these parameters could diminish disinfection effectiveness:

- Monitor the factors which affect effective disinfection (e.g. chlorine residual, pH and turbidity). Refer to section E5 on page 313 in regard to matters to be included in a LWU's verification monitoring program. For each system, determine and document the contact time.
- Maintain appropriate levels of free chlorine residual above 0.5 mg/L<sup>26</sup> for the available<sup>27</sup> contact time to provide a C.t. value greater than 15 mg/L/minute.
- Keep turbidity as low as practicable (aim for <1 NTU<sup>28</sup>). Turbidity higher than 1 NTU is acceptable where the source water is free from faecal contamination or where the effectiveness of chlorination has been validated<sup>29</sup>.
- Keep pH <8.5<sup>30</sup>
- Thoroughly clean and super-chlorinate<sup>31</sup> before use, all new and repaired distribution system infrastructure that is in contact with potable water such as mains and reservoirs.

<sup>24</sup> Each LWU's drinking water monitoring program (testing for E.coli (i.e. sampling location, frequency and number of samples tested) needs, as a minimum, to be in accordance with the NSW Health requirements. These requirements are consistent with ADWG and the number of annual samples allocated for each LWU is shown in Appendix D1, *2014-15 NSW Water Supply and Sewerage Benchmarking Report*. Appendix D1 shows that the required number of samples has been collected and tested for almost all LWUs. Each water utility should assess its monitoring requirements to determine whether additional monitoring above this minimum is needed.

<sup>25</sup> For very small communities, typically serving a population of about 30, with a high quality source water such as groundwater from a confined aquifer, it may be cost-effective for the LWU to complete the actions outlined in section E3 on page 310 at 4-monthly intervals, rather than consistently maintaining a positive free chlorine residual disinfectant as long as the regular E.coli tests results continue to comply with ADWG. Refer also to the 4th paragraph of section E4 on page 312.

<sup>26</sup> Part IV Information Sheet 1.3, Disinfection with Chlorine, ADWG.

<sup>27</sup> If the source water does not contain pathogens (e.g., a good quality groundwater from a confined aquifer), no chlorine contact time is required.

<sup>28</sup> Table 10.5, ADWG.

<sup>29</sup> Monitoring test results which consistently find no E.coli in a water supply would validate the safety of the water supply.

<sup>30</sup> For effective disinfection pH should be as low as possible, but this needs to be tempered by the need for corrosion control. In most cases a pH of 7.8 to 8.2 is desirable.

Disinfection is a **critical control point** and must be adequately monitored, preferably continuously, to ensure effective disinfection (refer section E1). For **free chlorine** disinfection, in addition to an appropriate operational monitoring program, the minimum requirements to be included in the SOP are as follows:

1. Check that turbidity of the water being disinfected remains below the target critical limits for the system. Take appropriate corrective actions if the critical limits are exceeded.
2. Check the chlorine demand of the water supply being chlorinated as the raw water quality changes and adjust the chlorine dose rate accordingly to achieve the required residual.
3. Check the pH of water to be disinfected where a pH correction facility has been provided.
4. Confirm correct functioning of each chlorination plant.
5. Verify that the required chlorine dose rate has been added to the water supply<sup>32</sup>.
6. Provide continuous monitoring and/or daily testing of free chlorine residual at representative sampling points after the appropriate chlorine contact time.

For other types<sup>33</sup> of disinfection systems appropriate SOPs need to be developed to ensure effective disinfection.

### E3 Barrier 2 - Distribution System Integrity

Once a water supply is effectively disinfected, enteric pathogens should not reappear within the distribution system unless there is a failure of the integrity of the distribution system (ADWG 2013, page 186). Once a water supply has been effectively disinfected (Barrier 1), the disinfected water should remain safe to drink even in the **absence**<sup>34</sup> of a disinfectant residual. The integrity of the distribution system (Barrier 2) is therefore the most important barrier to prevent contamination of a disinfected water supply. To verify and maintain integrity of all its distribution systems, each LWU must carry out the following actions as a matter of priority within **the next 12 months**. Thereafter, **repeat** these actions at frequencies appropriate for each system but no less than every **four (4) years**.

- a. Carry out a careful and **detailed examination**<sup>35</sup> of each service reservoir to ensure:
  - 1) the reservoir and its roof are secured from entry by birds, animals, vermin and windborne contaminants;
  - 2) rainwater cannot enter into the reservoir (i.e., no leaking roof or holes in the reservoir wall or gaps around the openings on the roof);

<sup>31</sup> Chlorine Fact Sheet under Drinking Water Treatment Chemicals, ADWG.

<sup>32</sup> Check to ensure the storage tanks or cylinders have adequate chlorine. For sodium hypochlorite dosing plants complete a drop test to verify the accuracy of the chlorinator dosing rate as in some instances the released oxygen could interfere with the actual dosage rate. Also check the concentration of the sodium hypochlorite solution in the storage tank and adjust the dosage rate to allow for any loss of chlorine strength.

<sup>33</sup> Refer to Part IV Information Sheets 1.4 to 1.8 of ADWG.

<sup>34</sup> Where there is a risk of *Naegleria fowleri*, a free chlorine residual of 0.5mg/L or higher will control *N. fowleri*, provided the disinfectant residual persists throughout the distribution system (ADWG 'Disinfection with Chlorine' Information Sheet, page 191).

<sup>35</sup> Note that the careful and detailed examination of each service reservoir in steps (1) to (5) above is **NOT** a routine inspection, but rather a careful and detailed examination of each reservoir in order to detect and rectify any breaches of reservoir integrity. Such detailed examinations are necessary proactive measures to be undertaken by each LWU in order to detect and rectify breaches which are often not identified during routine inspections. There have been several recent instances where following detection of E.coli in the water supply and imposing a boil water alert, such detailed inspections have identified and rectified the breaches to reservoir integrity. The following paragraphs highlight that any **deficiency in the roof or mesh design** needs to be identified and **rectified** by the LWU following such examination.

It is essential all service reservoirs are designed and constructed to prevent ingress of contaminants. Additionally, for each service reservoir, a careful inspection of the reservoir roof, wall and mesh is essential in order to detect any breaches to the reservoir's integrity. As noted on page 12 of the *2014-15 NSW Water Supply and Sewerage Benchmarking Report*, 86% of the 22 boil water alerts in regional NSW during the period May 2006 to June 2008 have been due to such breaches in reservoir integrity. In most cases the breach was not visible from ground level and required use of mobile lifting equipment in order to detect the breach. Similarly a number of recent boil water alerts have been due to breaches in service reservoir integrity.

A confirmed detection of **E.coli** in a microbiological test sample should trigger a careful review by the LWU of whether the requirements of section E3 above have been met.

- 3) roof is adequately drained especially near the openings and landings. The roof should extend beyond the reservoir wall;
  - 4) all inspection hatches are closed and locked at all times; and
  - 5) the reservoir site and roof are secured from unauthorised<sup>36</sup> access.
- b. Check the air valves and ensure they are functioning in accordance with the manufacturer's standard operating procedures.
  - c. Check any backflow prevention devices and ensure they are operating in accordance with the manufacturer's standard operating procedures, tested in accordance with AS3500 and there is no cross contamination.
  - d. Check and ensure all potable water connections with a risk of cross contamination such as connections to sewerage facilities (pumping station, treatment works, etc.) are provided with backflow prevention devices and are regularly tested in accordance with AS3500.
  - e. Check and ensure all potable water connections to top up alternative water systems such as rainwater tanks/automatic switching device on premises are provided with backflow prevention devices (refer to Circular LWU 17) and are operating in accordance with the manufacturer's standard operating procedures, tested in accordance with AS3500 and there is no cross contamination.
  - f. Review the reservoir maintenance standard operating procedures to ensure they are sound and fit for purpose<sup>35,37</sup>.
  - g. Review the standard operating procedures for repair and re-instatement of distribution system infrastructure that comes into contact with potable water such as mains and reservoirs to ensure the procedures are sound and fit for purpose<sup>37</sup>.
  - h. Undertake all remedial works to assure system integrity as a matter of **priority**.

#### E4 Barrier 3 – Maintain a Free Chlorine Residual in the Water in the Distribution System

A residual disinfectant such as chlorine is maintained in the water within the distribution system to help protect against minor contamination due to a breach in the distribution system integrity (Barrier 2 above).

**Monitoring of free chlorine residual**, in the water in a distribution system on at least a weekly basis provides one of the key indications of the proper operation of the chlorination, of system integrity, and the necessary data for the utility to carry out timely corrective action. More frequent monitoring will provide more information to make better and timely decisions on changes to disinfection required to protect public health. On-site testing of free and total chlorine residual (and if possible pH and turbidity) should be carried out each time an E. coli sample is collected for testing by the NSW Health Drinking Water Monitoring Program for verification monitoring of the drinking water quality in accordance with ADWG. The ADWG suggests that:

- a minimum free chlorine residual of about 0.2mg/L<sup>38</sup> be maintained in the water throughout the distribution system. Re-chlorination may be necessary to achieve this chlorine residual in very extensive water supply distribution systems with long detention times.

<sup>36</sup> Where access to third parties (e.g., telephone companies, SES, NSW Police, etc.) has been given to install equipment, appropriate written reinstatement and communication protocols need to be established between the LWU and each third party to ensure the reservoir integrity is not compromised. The LWU must conduct regular audits to ensure the protocols are being effectively implemented. Similar protocols should also be effected between the LWU and any service providers authorised by the LWU to access its service reservoir. A financial penalty should be imposed for any failures to comply with the protocol as these may breach the distribution system integrity and result in E.coli contamination of the supply and the need for a boil water alert. A model 'service reservoir integrity protocol' will be prepared by DPI Water to assist LWUs.

<sup>37</sup> As noted in section E2 on page 309, ensure your LWU's standard operating procedures including contracts with service providers include super chlorination and effective disinfection of any new and repaired or replaced water mains and other distribution system infrastructure that is in contact with potable water before the infrastructure is commissioned or the water service is reinstated.

<sup>38</sup> Example in Table A1.10 on page A-20, ADWG. Such a chlorine residual can normally be achieved for the vast majority of consumers supplied by a water supply distribution system. However, as noted in the 2nd paragraph of page 312, it may be difficult to maintain such a residual at the extremities of a distribution system.



- a sudden large drop in free chlorine residual may be an indicator of a fault in the chlorination system or an increase in the chlorine demand of the water or a major breach in distribution system integrity.

When it is difficult to maintain the desired target free chlorine residual level of  $\geq 0.2\text{mg/L}$  at the extremities of your system, your LWU should using a trial and error process increase the free chlorine residual level at the dosing points to the maximum generally acceptable<sup>39</sup> to the community. Consideration should be given to providing re-chlorination for systems where there is a significant risk of contamination of the reticulated water supply.

Once the desired free chlorine residual of the dosed water has been achieved and if the free chlorine residual at the extremities of the reticulation system continues to consistently remain below  $0.2\text{mg/L}$  but greater than  $0.05\text{mg/L}$  with E.coli test results showing 100% compliance<sup>24</sup>, then the LWU should undertake the actions outlined in section E3 on page 310 on an **annual**<sup>40</sup> basis.

If however, the free chlorine residual level is consistently below  $0.05\text{mg/L}$  with E.coli test results showing 100% compliance<sup>24,41</sup> and the LWU can demonstrate the continuous integrity of the water supply distribution system<sup>42</sup>, the LWU should then undertake the actions outlined in section E3 on page 310 on a **four monthly**<sup>41</sup> basis and should also complete the following:

1. inspect and flush as needed the extremities of the system to remove 'stagnant' water.
2. opportunistically install pipe loops to any existing dead-end mains (i.e. as part of your LWU's repair and/or renewal work).

The measures in paragraphs 3 and 4 above are warranted in order to minimise capital and operating expenditure, while assuring safety of the water supply.

## E5 Develop a Verification Monitoring Program

The verification monitoring program developed by a LWU for each distribution system should include the following:

- Parameters to be monitored (e.g. disinfectant residual, pH and turbidity)<sup>43</sup>.
- Sampling frequency.
- Sampling locations including system extremities<sup>44</sup>.
- Sampling methods and equipment.
- Schedules for sampling.
- Methods for quality assurance and validation of sampling results.
- Requirements for checking and interpreting results.
- Responsibilities and necessary training<sup>45</sup> of staff including induction of contractors.

<sup>39</sup> The risk posed by disinfection by-products is considerably smaller than the risk posed by the presence of pathogenic microorganisms in water that has not been disinfected (Guiding Principle 1 of ADWG).

<sup>40</sup> The first action in section E3 on page 310 may be undertaken from ground level using a telescope, binoculars, etc.

<sup>41</sup> If the microbiological test samples regularly fail for E.coli then the LWU must investigate the reasons for the failures and consider maintaining a free chlorine residual of about  $0.2\text{ mg/L}$  on a consistent basis. This could be achieved by one of many options such as early warning control/communication systems, secondary chlorination plants, sub-system cleaning including air scouring/swabbing of the pipeline, super chlorination, etc. It is expected the preferred option would be chosen on the basis of a cost-benefit analysis.

<sup>42</sup> If the LWU is finding difficulty in ensuring the continuous integrity of the water supply system due to remoteness of the operating staff, etc. then the LWU could consider intermittent manual dosing of chlorine to boost the chlorine residual or installation of a secondary chlorination plant. It is expected the preferred option would be chosen on a cost-benefit analysis. Manual dosing could be accomplished by dosing the required quantity of chlorine tablets or sodium hypochlorite into the service reservoir servicing the sub-system and/or using a portable liquid chlorine chlorinator.

<sup>43</sup> For filtered water supplies, all the treated water should normally have a turbidity of less than 1 NTU, with 95 per cent of the supply having a turbidity of under 0.3 NTU.

<sup>44</sup> Each LWU's sampling locations for monitoring microbiological water quality for reporting in the NSW Water Quality Database would be suitable for this purpose.

- Requirements for documentation and management of records, including how monitoring results will be recorded and stored.
- Requirements for reporting and communication of results.

## **E6 Field Tests**

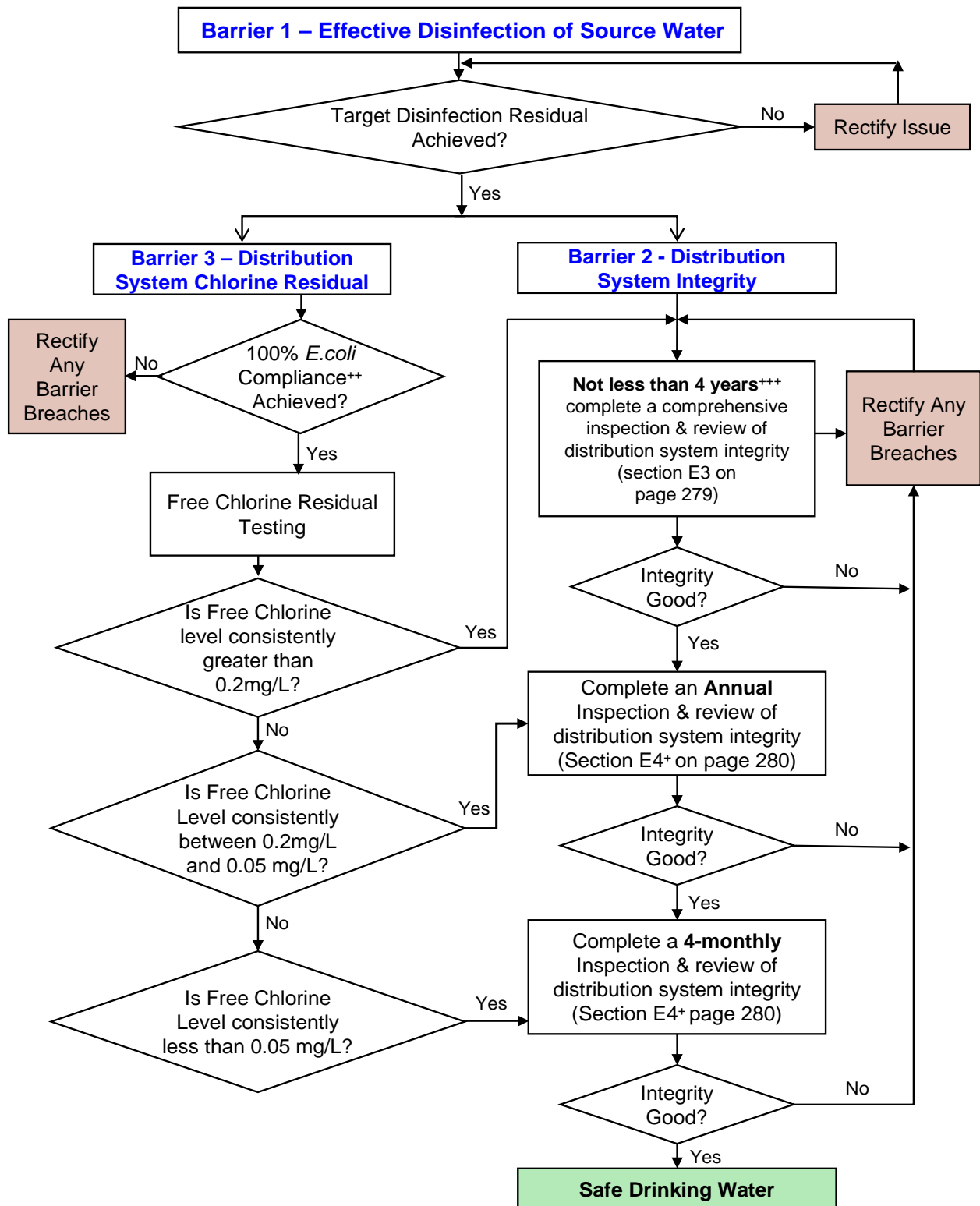
- Test kits for measuring chlorine residual, pH and turbidity are available.
- Chlorine residual, pH and turbidity measurements need to be done in the field.
- Ensure the operators have a thorough understanding of the field test kits especially the range they can measure, detection limits, error and interference tolerances.

If you wish to discuss any aspects covered in this Appendix, please contact the Manager Water and Sewerage, DPI Water on telephone: (02) 9842 8495 or email: [bill.ho@dpi.nsw.gov.au](mailto:bill.ho@dpi.nsw.gov.au).

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<sup>45</sup> LWU water treatment operators need to have appropriate skills and qualifications in accordance with page 23 of the NSW Guidelines for Drinking Water Systems, 2013. Refer also to page 36 of the *2014-15 NSW Water Supply and Sewerage Benchmarking Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) in regard to National Certification of Water Treatment Operators.

**Figure 1 – Effective disinfection<sup>1</sup> of a potable water supply and assuring integrity of the distribution system to prevent contamination of the supply**



+++ The first comprehensive inspection and review of water supply system integrity should be completed within 12 months in order to assure system integrity.

++ The 100% E.coli compliance requirement refers to test results where any failures in distribution system integrity have been detected and rectified by the LWU.

+ The actions in the 3rd and 4th paragraphs of section E4 on page 312 should be undertaken by the LWU over the next 12 months or 4 months respectively in order to assure continuing distribution system integrity. These actions are only applicable for the extremities of a distribution system where the free chlorine residual is consistently below 0.2 mg/L.

1 Figure 1 is on the basis of disinfection with free chlorine.



**Attachment 3**

**SUMMARY REPORT<sup>1</sup> ON ASSURING INTEGRITY & SAFETY OF  
WATER SUPPLY DISTRIBUTION SYSTEMS**

LWU -

Date -

Contact Officer -

Phone -

Email -

- Water Supply Distribution **System** -
- Detailed examination of service **reservoirs** :
- Date completed -
- Key **Deficiencies** Identified -
- **Rectification** Works Completed -
- Addressed all the requirements of **Circular LWU 18?** Y/N Date -
- Standard Operating Procedures (**SOP**) updated to address the requirements of Circular LWU18?  
Y/N Date -

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<sup>1</sup> This summary report has been prepared in response to DPI Water Circular LWU 18 of June 2014 and is to be retained in your LWU's records.

The first Summary Report prepared by a LWU for each of its water supply distribution systems is to be emailed to: [Bill.Ho@dpi.nsw.gov.au](mailto:Bill.Ho@dpi.nsw.gov.au).

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           | WATER RESOURCES                            |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |                           |         |         |         |   |         |         |         |   |         |         |         |
|---|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|---------------------------|---------|---------|---------|---|---------|---------|---------|---|---------|---------|---------|
|   | SOURCES OF WATER                           |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |                           |         |         |         |   |         |         |         |   |         |         |         |
|   | Volume of water sourced from surface water |         |         |         | Volume of water sourced from groundwater |         |         |         | Volume of water sourced from marine desalination |         |         |         | Volume of water sourced from recycling (ie where potable water would normally be supplied) |         |         |         | Volume from bulk supplier |         |         |         | Volume of potable water received from bulk supplier Excludes W6 & W28.2 |         |         |         | Volume of non-potable water received from bulk supplier Excludes W6 & W28.2 |         |         |         |
|   | W1   |         |         |         | W2                                       |         |         |         | W3.1   |         |         |         | W4   |         |         |         | W5                        |         |         |         | W5.1  |         |         |         | W5.2  |         |         |         |
|   | Includes W3.3                              |         |         |         | Includes W3.2 Excludes W25.1             |         |         |         |  |         |         |         | Excludes W28.4 Includes W23. Excludes W25.1  |         |         |         | W5=W5.1+W5.2+W6+W28.2     |         |         |         |   |         |         |         |   |         |         |         |
|   | (ML)                                       |         |         |         | (ML)                                     |         |         |         | (ML)   |         |         |         | (ML)   |         |         |         | (ML)                      |         |         |         | (ML)  |         |         |         | (ML)  |         |         |         |
|   | 2011/12                                    | 2012/13 | 2013/14 | 2014/15 | 2011/12                                  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                | 5,141                                      | 6,395   | 6,862   | 6,468   | 0  | 0       | 0       | 0       | 61,290   | 0       | 0       | 0       | 13,191   | 41,776  | 41,543  | 38,280  | 415,498                   | 510,299 | 523,725 | 509,573 | 0   | 0       | 0       | 0       | 415,498   | 510,299 | 523,725 | 509,573 |
| Hunter Water Corporation                | 61,035                                     | 66,060  | 67,253  | 64,281  | 2,159                                    | 2,561   | 4,230   | 2,734   | 0  | 0       | 0       | 0       | 1,873  | 1,874   | 2,505   | 3,045   | 0                         | 0       | 267     | 257     | 0   | 0       | 267     | 257     | 0   | 0       | 0       | 0       |
| Water NSW                               | 880,572                                    | 847,623 | 824,365 | 888,144 | 0  | 0       | 0       | 0       |  |         |         |         |  |         |         |         | 25                        | 1,014   | 2,524   | 2,043   |   |         |         |         | 25  | 1,014   | 2,524   | 2,043   |
| 1 Gosford City Council                  | 10,672                                     | 14,562  | 14,512  | 13,103  | 52                                       | 109     | 123     | 71      | 0  | 0       | 0       | 0       | 271  | 28      | 32      | 13      | 2,490                     | 660     | 1,598   | 2,429   | 2,490   | 660     | 1,598   | 2,429   | 0   | 0       | 0       | 0       |
| 2 Wyong Shire Council                   | 14,109                                     | 13,808  | 15,449  | 15,419  | 115                                      | 126     | 6       | 2       | 0  | 0       | 0       | 0       | 465  | 780     | 962     | 911     | 540                       | 1,169   | 465     | 551     | 540   | 1,169   | 465     | 551     | 0   | 0       | 0       | 0       |
| 3 Shoalhaven City Council               | 12,277                                     | 14,393  | 13,963  | 13,740  | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 73   | 194     | 194     | 173     | 72                        | 95      | 86      | 77      | 0   | 0       | 0       | 0       | 72  | 95      | 86      | 77      |
| 4 Rous Water                            | 11,132                                     | 11,077  | 11,521  | 11,183  | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 5 MidCoast Water                        | 7,775                                      | 8,010   | 8,124   | 7,845   | 540                                      | 556     | 542     | 526     | 0  | 0       | 0       | 0       | 0  | 133     | 372     | 373     | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 6 Tweed Shire Council                   | 8,851                                      | 9,317   | 9,802   | 9,284   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 338  | 431     | 563     | 385     | 0                         | 0       | 6       | 5       | 0   | 0       | 6       | 5       | 0   | 0       | 0       | 0       |
| 7 Port Macquarie Hastings Council       | 5,739                                      | 5,792   | 6,090   | 5,990   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 94   | 110     | 142     | 189     | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 8 Riverina Water                        | 2,549                                      | 2,590   | 2,625   | 2,212   | 9,193                                    | 12,329  | 11,819  | 12,564  | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 28                        | 34      | 56      | 32      | 28  | 34      | 56      | 32      | 0   | 0       | 0       | 0       |
| 10 Coffs Harbour City Council           | 5,582                                      | 5,864   | 5,957   | 5,688   | 0  |         | 0       | 0       |  |         |         |         |  |         |         |         | 0                         | 0       | 0       | 0       |   |         |         |         |   |         |         |         |
| 11 Albury City Council                  | 6,272                                      | 7,376   | 7,599   | 6,238   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 12 Fish River Water                     | 6,273                                      | 8,107   | 10,713  | 5,961   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 13 Tamworth Regional Council            | 8,426                                      | 9,376   | 9,358   | 6,890   | 447                                      | 613     | 579     | 1,045   | 0  | 0       | 0       | 0       | 34   | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 14 Clarence Valley Council              | 6,572                                      | 5,765   | 6,199   | 5,894   | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       | 109  | 128     | 176     | 195     | 0                         | 0       | 0       | 0       |   | 0       | 0       | 0       |   | 0       | 0       | 0       |
| 15 Eurobodalla Shire Council            | 3,366                                      | 2,914   | 3,055   | 3,132   | 0  | 483     | 363     | 161     | 0  | 0       | 0       | 0       | 86   | 189     | 216     | 243     | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 16 Wingecarribee Shire Council          | 868  | 1,119   | 1,352   | 515     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 35   | 98      | 124     | 163     | 3,490                     | 3,796   | 4,319   | 4,447   | 0   | 0       | 0       | 0       | 3,490   | 3,796   | 4,319   | 4,447   |
| 17 Queanbeyan City Council              | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,641                     | 3,836   | 3,995   | 3,937   | 3,641   | 3,836   | 3,995   | 3,937   | 0   | 0       | 0       | 0       |
| 18 Dubbo City Council                   | 4,488                                      | 6,510   | 6,406   | 6,148   | 1,652                                    | 2,199   | 1,934   | 1,999   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 19 Orange City Council                  | 4,035                                      | 4,528   | 4,557   | 4,748   | 79                                       | 120     | 59      | 53      | 0  | 0       | 0       | 0       | 2,218  | 1,573   | 2,903   | 2,826   | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 21 Bathurst Regional Council            |  | 6,598   | 6,354   | 6,642   |  | 5       | 9       | 31      |  | 0       | 0       | 0       |  | 579     | 638     | 653     |                           | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 22 Lismore City Council                 | 171  | 210     | 168     | 195     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,084                     | 3,117   | 3,258   | 3,238   | 3,084   | 3,117   | 3,258   | 3,238   | 0   | 0       | 0       | 0       |
| 23 Bega Valley Shire Council            | 1,803                                      | 2,398   | 1,756   | 1,635   | 1,465                                    | 1,550   | 1,489   | 1,402   | 0  | 0       | 0       | 0       | 408  | 484     | 623     | 436     | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 24 Ballina Shire Council                | 119  | 134     | 156     | 132     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 104  | 266     | 257     | 575     | 3,272                     | 3,607   | 3,684   | 3,604   | 3,272   | 3,607   | 3,684   | 3,604   | 0   | 0       | 0       | 0       |
| 25 Kempsey Shire Council                | 0  | 0       | 0       | 0       | 3,333                                    | 3,479   | 3,627   | 3,530   | 0  | 0       | 0       | 0       | 0  | 75      | 97      | 77      | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| 26 Essential Energy                     | 3,746                                      | 4,660   | 760     | 907     | 0  | 0       | 0       | 0       |  |         |         |         | 416  | 782     | 515     | 525     | 1,061                     | 1,140   | 4,940   | 4,185   |   |         |         |         | 1,061   | 1,140   | 4,940   | 4,185   |
| 27 Byron Shire Council                  | 334  | 402     | 408     | 370     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 374  | 547     | 390     | 285     | 2,356                     | 2,365   | 2,429   | 2,371   | 2,356   | 2,365   | 2,429   | 2,371   | 0   | 0       | 0       | 0       |
| 28A Goldenfields Water (Reticulation)   |  |         | 0       | 0       |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,475                     | 5,551   | 5,794   | 5,759   | 4,475   | 5,551   | 5,794   | 5,759   | 0   |         | 0       | 0       |
| 28B Goldenfields Water (Bulk Water Su   | 3,394                                      | 3,722   | 3,781   | 4,136   | 3,601                                    | 4,556   | 4,644   | 4,435   |  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 306                       | 389     | 450     | 417     | 195   | 250     | 309     | 277     | 111   | 139     | 141     | 140     |
| 20 Goulburn Mulwaree Council            |  | 2,768   | 2,707   | 2,558   |  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       |                           | 71      | 52      | 46      | 0   | 0       | 0       | 0       | 18  | 71      | 52      | 46      |
| 9 Wagga Wagga Council                   |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |                           |         |         |         |   |         |         |         |   |         |         |         |
| LWU Range Max                           | 14,109                                     | 14,562  | 15,449  | 15,419  | 9,193                                    | 12,329  | 11,819  | 12,564  | 0  | 0       | 0       | 0       | 2,218  | 1,573   | 2,903   | 2,826   | 4,475                     | 5,551   | 5,794   | 5,759   | 4,475   | 5,551   | 5,794   | 5,759   | 3,490   | 3,796   | 4,940   | 4,447   |
| LWU Range Min                           | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0                         | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |
| Median of NMU Indicators shown in Table | 4,488                                      | 5,765   | 5,257   | 5,218   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 35   | 98      | 124     | 163     | 0                         | 0       | 3       | 3       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       |

Notes \* Indicators shown are those published in the 2014-15 National Performance Report.

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                              | WATER RESOURCES   |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |
|--|---|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|
|  | USES OF WATER SUPPLIED  |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |
|  | Volume of water supplied - Residential<br>(incl nonpotable)       |         |         |         | Volume of potable water supplied – Residential<br>Excludes recycled water |         |         |         | Volume of non-potable water<br>supplied – Residential<br>excludes recycled water |         |         |         | Volume of water supplied - commercial,<br>municipal, industrial<br>(incl nonpotable) |         |         |         | Volume of potable water supplied -<br>Commercial, municipal and industrial |         |         |         | Volume of non-potable water<br>supplied - Commercial, municipal<br>and industrial |         |         |         | Volume of water supplied - other<br>(incl nonpotable)        |         |         |         |
|  | W8<br><br>Includes recycled water<br>W8=W8.1+W8.2+W20<br><br>(ML) |         |         |         | W8.1<br><br>(ML)  |         |         |         | W8.2<br><br>(ML)   |         |         |         | W9<br><br>Includes recycled water<br>W9=W9.1+W9.2+W21<br><br>(ML)                    |         |         |         | W9.1<br><br>(ML)   |         |         |         | W9.2<br><br>(ML)  |         |         |         | W10<br><br>W10=W10.1+W10.2+W25<br>excludes W10.3<br><br>(ML) |         |         |         |
|  | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                   | 321,656   | 335,976 | 354,877 | 352,843 | 319,783   | 333,912 | 352,740 | 350,705 | 0  | 0       | 0       | 0       | 122,671  | 123,804 | 126,539 | 123,680 | 110,479  | 112,149 | 114,695 | 112,827 | 1,484   | 1,111   | 1,639   | 1,171   | 50,793   | 63,729  | 60,076  | 52,302  |
| Hunter Water Corporation                   | 34,911  | 38,370  | 40,150  | 37,723  | 34,911  | 38,370  | 40,150  | 37,723  | 0  | 0       | 0       | 0       | 20,923   | 22,670  | 23,580  | 21,430  | 19,225   | 21,026  | 21,306  | 18,572  | 0   | 0       | 0       | 0       | 9,226  | 9,198   | 9,995   | 10,596  |
| Water NSW                                  |   |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |
| 1 Gosford City Council                     | 9,744   | 10,545  | 10,967  | 10,955  | 9,744   | 10,545  | 10,967  | 10,955  | 0  | 0       | 0       | 0       | 2,125  | 2,501   | 2,512   | 2,528   | 2,111  | 2,473   | 2,494   | 2,507   | 0   | 0       | 0       | 8       | 1,369  | 1,365   | 3,053   | 1,877   |
| 2 Wyong Shire Council                      | 8,735   | 9,696   | 9,353   | 9,133   | 8,735   | 9,039   | 9,302   | 9,132   |  |         |         | 1       | 3,239  | 3,023   | 3,984   | 3,813   | 2,912  | 3,022   | 3,300   | 3,292   |   |         |         |         | 1,135  | 1,497   | 1,421   | 1,498   |
| 3 Shoalhaven City Council                  | 5,602   | 6,432   | 6,463   | 6,276   | 5,602   | 6,425   | 6,455   | 6,273   | 6  | 7       | 8       | 3       | 6,148  | 6,710   | 6,952   | 6,015   | 3,741  | 4,108   | 3,903   | 3,914   | 2,369   | 2,310   | 2,405   | 1,923   | 1,038  | 1,162   | 1,280   | 1,878   |
| 4 Rous Water                               | 0   | 0       | 0       | 0       | 0   | 0       |         | 0       | 0  | 0       | 0       | 0       | 671  | 764     | 824     | 806     | 671  | 764     | 824     | 806     |   |         |         |         | 1,168  | 605     | 652     | 508     |
| 5 MidCoast Water                           | 4,685   | 5,107   | 5,365   | 5,102   | 4,685   | 5,107   | 5,365   | 5,102   | 0  | 0       | 0       | 0       | 2,036  | 2,329   | 2,891   | 2,881   | 2,036  | 2,196   | 2,372   | 2,296   |   |         |         |         | 1,594  | 1,263   | 1,301   | 1,346   |
| 6 Tweed Shire Council                      | 4,966   | 5,379   | 5,685   | 5,545   | 4,966   | 5,379   | 5,685   | 5,545   | 0  | 0       | 0       | 0       | 2,442  | 2,542   | 2,899   | 2,597   | 2,106  | 2,160   | 2,336   | 2,097   |   |         |         |         | 1,202  | 1,167   | 1,183   | 1,024   |
| 7 Port Macquarie Hastings Council          | 3,865   | 4,213   | 4,296   | 4,188   | 3,865   | 4,213   | 4,296   | 4,188   | 0  | 0       | 0       | 0       | 1,431  | 1,643   | 1,752   | 1,813   | 1,243  | 1,343   | 1,322   | 1,319   | 94  | 111     | 141     | 195     | 713  | 617     | 625     | 611     |
| 8 Riverina Water                           | 6,540   | 8,856   | 8,741   | 8,513   | 6,540   | 8,856   | 8,741   | 8,513   | 0  | 0       | 0       | 0       | 4,617  | 5,447   | 5,471   | 5,548   | 4,617  | 5,447   | 5,471   | 5,548   |   |         |         |         | 1,240  | 1,590   | 1,579   | 1,562   |
| 10 Coffs Harbour City Council              | 3,599   | 3,721   | 3,929   | 3,912   | 3,599   | 3,721   | 3,929   | 3,912   |  |         |         |         | 1,442  | 1,635   | 1,998   | 1,618   | 1,371  | 1,370   | 1,422   | 1,300   | 0   | 6       | 9       | 9       | 575  | 797     | 607     | 572     |
| 11 Albury City Council                     | 4,242   | 5,320   | 5,003   | 4,836   | 4,242   | 5,320   | 5,002   | 4,835   | 0  | 0       | 1       | 1       | 1,586  | 1,854   | 2,118   | 2,050   | 1,585  | 1,850   | 1,925   | 1,833   | 1   | 4       | 193     | 217     | 647  | 761     | 759     | 741     |
| 12 Fish River Water                        |   | 0       | 0       | 0       |   | 0       | 0       | 0       | 50   | 0       | 0       | 0       | 4,141  | 5,970   | 5,072   | 1,144   | 0  | 65      | 72      | 120     | 4,141   | 5,905   | 5,000   | 1,024   | 546  | 1,411   | 1,753   | 1,555   |
| 13 Tamworth Regional Council               | 3,852   | 4,925   | 5,532   | 3,691   | 3,852   | 4,925   | 5,532   | 3,691   | 0  | 0       | 0       | 0       | 3,556  | 4,096   | 3,734   | 3,493   | 3,522  | 3,901   | 3,594   | 3,353   | 0   | 195     | 140     | 140     | 809  | 965     | 1,014   | 783     |
| 14 Clarence Valley Council                 | 2,766   | 2,951   | 3,051   | 2,793   | 2,722   | 2,951   | 3,051   | 2,793   | 44   | 0       | 0       | 0       | 1,867  | 1,989   | 2,105   | 1,938   | 1,758  | 1,797   | 1,866   | 1,696   | 0   | 64      | 63      | 47      | 1,550  | 982     | 1,509   | 1,553   |
| 15 Eurobodalla Shire Council               | 1,927   | 2,146   | 2,204   | 2,112   | 1,927   | 2,146   | 2,204   | 2,112   |  | 0       | 0       | 0       | 710  | 817     | 865     | 854     | 633  | 647     | 675     | 631     |   |         |         |         | 806  | 604     | 539     | 550     |
| 16 Wingecarribee Shire Council             | 2,658   | 3,149   | 3,437   | 3,092   | 2,658   | 3,149   | 3,437   | 3,092   | 0  | 0       | 0       | 0       | 889  | 1,044   | 1,044   | 948     | 854  | 946     | 1,044   | 948     |   |         |         |         | 558  | 882     | 967     | 495     |
| 17 Queanbeyan City Council                 | 2,786   | 2,645   | 2,757   | 2,837   | 2,786   | 2,645   | 2,757   | 2,837   | 0  | 0       | 0       | 0       | 539  | 515     | 649     | 607     | 539  | 515     | 649     | 607     |   |         |         |         | 568  | 670     | 589     | 493     |
| 18 Dubbo City Council                      | 3,690   | 5,455   | 5,292   | 5,088   | 3,690   | 5,455   | 5,292   | 5,088   | 0  | 0       | 0       | 0       | 1,819  | 3,209   | 2,767   | 2,661   | 1,705  | 2,949   | 2,498   | 2,453   | 114   | 260     | 269     | 208     | 589  | 934     | 865     | 838     |
| 19 Orange City Council                     |   | 2,725   | 2,695   | 2,717   | 2,426   | 2,725   | 2,695   | 2,717   | 0  | 0       | 0       | 0       | 2,975  | 2,660   | 3,987   | 3,941   | 757  | 1,087   | 1,084   | 1,115   |   |         |         |         | 487  | 470     | 462     | 649     |
| 21 Bathurst Regional Council               | 2,472   | 3,574   | 3,236   | 3,238   | 2,472   | 3,569   | 3,227   | 3,206   | 2  | 5       | 9       | 32      | 3,221  | 2,832   | 3,253   | 3,198   | 2,256  | 1,831   | 2,213   | 2,156   | 965   | 1,001   | 1,040   | 1,042   | 499  | 586     | 538     | 583     |
| 22 Lismore City Council                    | 1,836   | 1,859   | 1,975   | 1,959   | 1,836   | 1,859   | 1,975   | 1,959   | 0  | 0       | 0       | 0       | 912  | 851     | 894     | 904     | 912  | 851     | 894     | 904     |   |         |         |         | 436  | 301     | 319     | 315     |
| 23 Bega Valley Shire Council               | 1,703   | 1,814   | 1,765   | 1,811   | 1,703   | 1,814   | 1,765   | 1,811   | 0  | 0       | 0       | 0       | 1,349  | 1,549   | 1,472   | 1,171   | 941  | 1,038   | 945     | 747     | 0   | 27      | 66      | 57      | 647  | 1,098   | 534     | 479     |
| 24 Ballina Shire Council                   | 2,180   | 2,326   | 2,483   | 2,345   | 2,180   | 2,326   | 2,483   | 2,345   | 0  | 0       | 0       | 0       | 709  | 628     | 844     | 1,064   | 605  | 628     | 571     | 547     |   |         |         |         | 620  | 787     | 805     | 810     |
| 25 Kempsey Shire Council                   | 1,545   | 1,682   | 1,686   | 1,705   | 1,545   | 1,682   | 1,686   | 1,705   | 0  | 0       | 0       | 0       | 1,032  | 1,215   | 1,223   | 1,315   | 1,005  | 1,142   | 1,133   | 1,255   |   |         |         |         | 767  | 622     | 837     | 756     |
| 26 Essential Energy                        | 2,271   | 2,731   | 2,697   | 2,471   | 2,271   | 2,690   | 2,697   | 2,471   | 33   | 41      | 0       | 0       | 2,737  | 3,704   | 3,633   | 3,407   | 1,743  | 2,022   | 1,967   | 1,759   | 578   | 1,053   | 957     | 872     | 455  | 521     | 513     | 465     |
| 27 Byron Shire Council                     | 1,614   | 1,687   | 1,754   | 1,758   | 1,614   | 1,687   | 1,754   | 1,758   | 0  | 0       | 0       | 0       | 1,197  | 1,331   | 1,211   | 1,350   | 823  | 784     | 821     | 777     | 0   | 0       | 0       | 285     | 269  | 296     | 276     | 276     |
| 28A Goldenfields Water (Reticulation)      | 1,365   | 1,819   | 2,009   | 1,940   | 1,365   | 1,797   | 1,986   | 1,918   | 17   | 22      | 23      | 22      | 2,637  | 3,157   | 3,600   | 3,637   | 2,563  | 3,074   | 3,493   | 3,526   | 74  | 83      | 107     | 111     | 456  | 543     | 611     | 606     |
| 28B Goldenfields Water (Bulk Water Su      |   |         | 0       | 0       | 0   |         | 0       | 0       | 0  |         | 0       | 0       |  |         | 0       | 0       |  |         |         |         |   |         |         |         | 719  | 490     | 440     | 440     |
| 20 Goulburn Mulwaree Council               | 1,325   | 1,447   | 1,516   | 1,403   | 1,325   | 1,447   | 1,516   | 1,403   | 0  |         | 0       | 0       | 859  | 1,070   | 1,162   | 1,026   | 740  | 843     | 921     | 822     | 1   | 34      | 37      | 10      | 235  | 311     | 349     | 319     |
| 9 Wagga Wagga Council                      |   |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |
| LWU Range Max                              | 9,744   | 10,545  | 10,967  | 10,955  | 9,744   | 10,545  | 10,967  | 10,955  | 50   | 41      | 23      | 32      | 6,148  | 6710    | 6,952   | 6,015   |  | 5,447   | 5,471   | 5,548   | 4141  | 5,905   | 5,000   | 1,923   | 1,594  | 1590    | 3053    | 1,878   |
| LWU Range Min                              | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 539  | 515     | 0       | 0       |  | 65      | 72      | 120     | 0   | 0       | 0       | 8       | 235  | 296     | 276     | 276     |
| Median of NMU Indicators<br>shown in Table | 2,766   | 2,951   | 2,904   | 2,815   | 2,658   | 2,951   | 3,051   | 2,815   | 0  | 0       | 0       | 0       | 1,819  | 1989    | 2,112   | 1,876   |  | 1,370   | 1,422   | 1,319   | 1   | 83      | 140     | 195     | 647  | 774     | 706     | 630     |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | WATER RESOURCES                                      |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |
|---|-----------------------------------|--|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|
|   |                                   | USES OF WATER SUPPLIED                               |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |
|   |                                   | Volume of potable water supplied – Non-Revenue Water |         |         |         | Volume of non-potable water supplied – Other |         |         |         | Volume of water supplied - managed aquifer recharge |         |         |         | Volume of water supplied - agricultural irrigation |         |         |         | Total Urban Water Supplied<br>(Excl Bulk Water W14 & Environmental Flows W13<br>Incl Urban Recycled & Losses)<br>W11<br>W11=W8+W9+W10<br>=W11.1+W11.2+W26-W22-W23-W24+W28.4<br>Includes recycled, excludes environmental & aquifer recharge |         |         |         | Total urban potable water supplied<br>W11.1=W8.1+W9.1+W10.1<br>excludes bulk exports |         |         |         | Total urban non-potable water supplied<br>W11.2=W8.2+W9.2+W10.2<br>excludes recycled & stormwater |         |         |         |
|   |                                   | W10.1  |         |         |         | W10.2  |         |         |         | W10.3   |         |         |         | W10.4  |         |         |         | (ML)  |         |         |         | W11.1  |         |         |         | W11.2   |         |         |         |
|   |                                   | (ML)   |         |         |         | (ML)   |         |         |         | (ML)  |         |         |         | (ML)   |         |         |         | (ML)  |         |         |         | (ML)   |         |         |         | (ML)  |         |         |         |
|   |                                   | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                      | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         | 495,120   | 523,509 | 541,492 | 528,825 | 430,262  | 446,061 | 467,435 | 463,532 | 1,484   | 1,111   | 1,639   | 1,171   |
| Hunter Water Corporation                |                                   | 9,046  | 9,198   | 9,995   | 10,596  | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 65,060  | 70,238  | 73,725  | 69,749  | 63,182   | 68,594  | 71,451  | 66,891  | 0   | 0       | 0       | 0       |
| Water NSW                               |                                   |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         | 432,443   | 536,949 | 551,686 | 538,472 |  |         |         |         | 432,443   | 536,949 | 551,686 | 538,472 |
| 1                                       | Gosford City Council              | 1,317  | 1,270   | 2,922   | 1,784   | 52   | 95      | 117     | 63      | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 13,238  | 14,411  | 16,532  | 15,335  | 13,172   | 14,288  | 16,383  | 15,246  | 52  | 95      | 117     | 70      |
| 2                                       | Wyong Shire Council               | 1,135  | 1,497   | 1,421   | 1,498   |  |         |         |         |   |         |         |         |  |         |         |         | 13,229  | 14,216  | 14,758  | 14,444  | 12,782   | 13,558  | 14,023  | 13,922  | 1   | 1       | 1       | 1       |
| 3                                       | Shoalhaven City Council           | 1,038  | 1,162   | 1,280   | 1,878   | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 12,794  | 14,304  | 14,695  | 14,169  | 10,381   | 11,695  | 11,638  | 12,065  | 2,375   | 2,317   | 2,413   | 1,926   |
| 4                                       | Rous Water                        | 1,168  | 605     | 652     | 508     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 1,839   | 1,369   | 1,476   | 1,314   | 1,839  | 1,369   | 1,476   | 1,314   | 0   | 0       | 0       | 0       |
| 5                                       | MidCoast Water                    | 1,594  | 1,263   | 1,301   | 1,346   | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 8,315   | 8,699   | 9,557   | 9,329   | 8,315  | 8,566   | 9,038   | 8,744   | 0   | 0       | 0       | 0       |
| 6                                       | Tweed Shire Council               | 1,202  | 1,167   | 1,183   | 1,024   | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 3       | 8,610   | 9,088   | 9,767   | 9,166   | 8,274  | 8,706   | 9,204   | 8,666   | 0   | 0       | 0       | 0       |
| 7                                       | Port Macquarie Hastings Council   | 713  | 617     | 625     | 611     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 6,009   | 6,473   | 6,673   | 6,612   | 5,821  | 6,173   | 6,243   | 6,118   | 94  | 111     | 141     | 195     |
| 8                                       | Riverina Water                    | 1,240  | 1,590   | 1,579   | 1,562   | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 12,397  | 15,893  | 15,791  | 15,623  | 12,397   | 15,893  | 15,791  | 15,623  | 0   | 0       | 0       | 0       |
| 10                                      | Coffs Harbour City Council        | 575  | 797     | 607     | 572     |  |         |         |         |   |         |         |         |  |         |         |         | 5,616   | 6,153   | 6,534   | 6,102   | 5,545  | 5,888   | 5,958   | 5,784   | 0   | 6       | 9       | 9       |
| 11                                      | Albury City Council               | 647  | 761     | 759     | 741     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 6,475   | 7,935   | 7,880   | 7,627   | 6,474  | 7,931   | 7,686   | 7,409   | 1   | 4       | 194     | 218     |
| 12                                      | Fish River Water                  | 546  | 1,411   | 1,753   | 1,555   | 0  |         | 0       | 0       |   |         | 0       | 0       |  |         | 0       | 0       | 4,867   | 7,381   | 6,825   | 2,699   | 676  | 1,476   | 1,825   | 1,675   | 4,191   | 5,905   | 5,000   | 1,024   |
| 13                                      | Tamworth Regional Council         | 809  | 965     | 1,014   | 783     | 0  | 0       | 0       | 0       |   | 0       | 0       | 0       | 34   | 0       | 0       | 0       | 8,217   | 9,986   | 10,280  | 7,967   | 8,183  | 9,791   | 10,140  | 7,827   | 0   | 195     | 140     | 140     |
| 14                                      | Clarence Valley Council           | 1,550  | 982     | 1,509   | 1,553   | 0  | 0       | 0       | 0       |   | 0       | 0       | 0       |  | 0       | 0       | 0       | 6,183   | 5,922   | 6,665   | 6,284   | 6,030  | 5,730   | 6,426   | 6,042   |   |         |         |         |
| 15                                      | Eurobodalla Shire Council         | 806  | 604     | 539     | 550     | 0  | 0       | 0       | 0       |   | 0       | 0       | 0       |  | 0       | 0       | 0       | 3,443   | 3,567   | 3,608   | 3,516   | 3,366  | 3,397   | 3,418   | 3,293   | 0   | 0       | 0       | 0       |
| 16                                      | Wingecarribee Shire Council       | 558  | 882     | 967     | 495     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,105   | 5,075   | 5,448   | 4,535   | 4,070  | 4,977   | 5,448   | 4,535   | 0   | 0       | 0       | 0       |
| 17                                      | Queanbeyan City Council           | 568  | 670     | 589     | 493     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,893   | 3,830   | 3,995   | 3,937   | 3,893  | 3,830   | 3,995   | 3,937   | 0   | 0       | 0       | 0       |
| 18                                      | Dubbo City Council                | 589  | 934     | 865     | 838     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 6,098   | 9,598   | 8,924   | 8,587   | 5,984  | 9,338   | 8,655   | 8,379   | 114   | 260     | 269     | 208     |
| 19                                      | Orange City Council               | 487  | 470     | 462     | 649     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   | 5,855   | 7,144   | 7,307   | 3,670  | 4,282   | 4,241   | 4,481   | 0   | 0       | 0       | 0       |
| 21                                      | Bathurst Regional Council         | 499  | 586     | 538     | 583     | 0  |         |         | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 6,194   | 6,992   | 7,027   | 7,019   | 5,227  | 5,986   | 5,978   | 5,945   | 967   | 1,006   | 1,049   | 1,074   |
| 22                                      | Lismore City Council              | 436  | 301     | 319     | 315     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,184   | 3,011   | 3,188   | 3,178   | 3,184  | 3,011   | 3,188   | 3,178   | 0   | 0       | 0       | 0       |
| 23                                      | Bega Valley Shire Council         | 647  | 1,098   | 534     | 479     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,699   | 4,461   | 3,770   | 3,461   | 3,291  | 3,950   | 3,429   | 3,037   | 0   | 27      | 66      | 57      |
| 24                                      | Ballina Shire Council             | 620  | 787     | 805     | 810     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,509   | 3,741   | 4,132   | 4,219   | 3,405  | 3,741   | 3,859   | 3,702   | 0   | 0       | 0       | 0       |
| 25                                      | Kempsey Shire Council             | 767  | 622     | 837     | 756     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,344   | 3,519   | 3,746   | 3,776   | 3,317  | 3,446   | 3,656   | 3,716   | 27  | 73      | 0       | 0       |
| 26                                      | Essential Energy                  | 455  | 521     | 513     | 465     |  |         |         |         |   |         |         |         |  |         |         |         | 5,496   | 6,956   | 6,843   | 6,343   | 4,469  | 5,233   | 5,177   | 4,695   | 611   | 1,094   | 957     | 872     |
| 27                                      | Byron Shire Council               | 269  | 296     | 276     | 276     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,080   | 3,314   | 3,241   | 3,384   | 2,706  | 2,767   | 2,851   | 2,811   | 0   | 0       | 0       | 285     |
| 28A                                     | Goldenfields Water (Reticulation) | 436  | 541     | 609     | 605     | 20   | 2       | 2       | 1       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,475   | 5,519   | 6,220   | 6,183   | 4,364  | 5,412   | 6,088   | 6,049   | 111   | 107     | 132     | 134     |
| 28B                                     | Goldenfields Water (Bulk Water Su | 719  | 490     | 440     | 440     | 0  |         | 0       | 0       |   |         | 0       | 0       |  |         | 0       | 0       | 719   | 490     | 440     | 440     | 719  | 490     | 440     | 440     |   | 0       | 0       | 0       |
| 20                                      | Goulburn Mulwaree Council         | 235  | 311     | 349     | 319     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 2,419   | 2,828   | 3,027   | 2,748   | 2,300  | 2,601   | 2,786   | 2,544   | 1   | 34      | 37      | 10      |
| 9                                       | Wagga Wagga Council               |  |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |
| LWU Range Max                           |                                   | 1,594  | 1,590   | 2,922   | 1,878   | 52   | 95      | 117     | 63      | 0   | 0       | 0       | 0       | 34   | 0       | 0       | 3       | 13238   | 15893   | 16532   | 15,623  | 13172  | 15,893  | 16,383  | 15,623  | 4191  | 5,905   | 5,000   | 1,926   |
| LWU Range Min                           |                                   | 235  | 296     | 276     | 276     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 719   | 490     | 440     | 440     | 676  | 490     | 440     | 440     | 0   | 0       | 0       | 0       |
| Median of NMU Indicators shown in Table |                                   | 647  | 774     | 706     | 630     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 5496  | 6038    | 6669    | 6,234   | 4417   | 5,323   | 5,703   | 5,240   | 0   | 4       | 1       | 9       |

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                              |                                   | WATER RESOURCES  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |
|--|-----------------------------------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|---|
|  |                                   | USES OF WATER SUPPLIED   |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |
|  |                                   | Total volume of potable water produced<br>W11.3=W11.1+W14.1-W5.1<br>excludes recycled & stormwater |         |         |         | Average Annual Residential Water<br>Supplied |         |         |         | Volume of water supplied - Environmental<br>flows  |         |         |         | Volume of bulk water exports                                       |         |         |         | Volume of potable bulk water exports<br>excludes recycled & stormwater |         |         |         | Volume of non-potable bulk water exports<br>excludes recycled & stormwater |         |         |         | Volume of bulk recycled water<br>exports |         |         |         |   |
|  |                                   | W11.3  |         |         |         | W12  |         |         |         | W13<br>Generally upstream of master meter<br>Excludes recycled & aquifer recharge & stormwater |         |         |         | W14<br>W14=W14.1+W14.2+W15+W28.1<br>Includes recycled & stormwater |         |         |         | W14.1  |         |         |         | W14.2  |         |         |         | W15<br>component of W14                  |         |         |         |   |
|  |                                   | (ML)   |         |         |         | (kL/prop)                                    |         |         |         | (ML)   |         |         |         | (ML)   |         |         |         | (ML)   |         |         |         | (ML)   |         |         |         | (ML)                                     |         |         |         |   |
|  |                                   | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                      | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                  | 2012/13 | 2013/14 | 2014/15 |   |
| Sydney Water Corporation                   |                                   | 480,733  | 509,790 | 527,511 | 515,834 | 193  | 198     | 206     | 201     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | NA   | NA      | NA      | NA      | NA   | NA      | NA      | NA      | 0  |         |         | 0       |   |
| Hunter Water Corporation                   |                                   | 63,182   | 68,623  | 71,483  | 67,014  | 163  | 176     | 181     | 168     | 5,110  | 5,110   | 5,110   | 5,110   | 12   | 29      | 299     | 380     | 12   | 29      | 299     | 380     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| Water NSW                                  |                                   |  |         |         |         |  |         |         |         | 440,325  | 310,309 | 272,314 | 349,307 | 418,175  | 521,945 | 536,435 | 520,830 |  |         |         |         | 418,175  | 521,945 | 536,435 | 520,830 |  |         |         |         |   |
| 1  | Gosford City Council              | 13,705   | 15,444  | 16,532  | 13,103  | 145  | 157     | 161     | 160     |  |         | 0       | 0       | 533  | 1,156   | 149     | 286     | 533  | 1,156   | 149     | 286     | 0  | 0       | 0       | 0       | 0  |         | 0       | 0       | 0 |
| 2  | Wyong Shire Council               | 15,218   | 15,018  | 15,913  | 13,680  | 151  | 166     | 158     | 150     | 4,198  | 4,198   | 4,198   | 4,198   | 2,436  | 585     | 1,890   | 309     | 2,436  | 585     | 1,890   | 309     |  |         |         |         |  |         | 0       | 0       |   |
| 3  | Shoalhaven City Council           | 10,381   | 11,695  | 11,638  | 12,065  | 130  | 149     | 148     | 143     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 4  | Rous Water                        | 11,132   | 11,077  | 11,521  | 11,183  |  |         |         |         |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 9,293  | 9,708   | 10,045  | 9,869   | 9,293  | 9,708   | 10,045  | 9,869   | 0  | 0       | 0       | 0       |   |
| 5  | MidCoast Water                    | 8,315  | 8,566   | 9,038   | 8,744   | 131  | 143     | 150     | 142     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 6  | Tweed Shire Council               | 8,274  | 8,706   | 9,204   | 8,661   | 163  | 177     | 184     | 178     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 7  | Port Macquarie Hastings Council   | 5,821  | 6,173   | 6,243   | 6,118   | 144  | 157     | 157     | 151     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 8  | Riverina Water                    | 12,397   | 15,893  | 15,791  | 15,591  | 256  | 347     | 324     | 311     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |  |         |         |         |   |
| 10   | Coffs Harbour City Council        |  | 5,888   | 5,958   | 5,784   | 156  | 161     | 169     | 167     |  |         |         |         | 401  | 63      | 0       |         |  |         | 0       | 954     | 401  | 63      | 0       |         |  |         | 0       | 0       |   |
| 11   | Albury City Council               | 6,743  | 8,310   | 8,078   | 7,788   | 203  | 255     | 232     | 205     |  |         | 0       | 0       | 269  | 379     | 392     | 379     | 269  | 379     | 392     | 379     | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 12   | Fish River Water                  | 1,366  | 2,309   | 2,615   | 871     |  |         |         |         | 75   | 809     | 1,025   | 1,025   | 1,407  | 2,432   | 3,912   | 2,793   | 690  | 833     | 790     | 751     | 717  | 1,599   | 3,122   | 2,042   |  |         |         |         |   |
| 13   | Tamworth Regional Council         | 8,183  | 9,791   | 10,140  | 7,827   | 204  | 261     | 287     | 188     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 14   | Clarence Valley Council           | 6,030  | 5,730   | 6,426   | 6,042   | 139  | 148     | 161     | 147     |  |         | 0       | 1,696   | 2,445  | 0       | 0       | 0       |  | 0       | 0       | 0       |  | 0       | 0       | 0       |  | 0       | 0       | 0       |   |
| 15   | Eurobodalla Shire Council         | 3,366  | 3,397   | 3,418   | 3,293   | 104  | 116     | 119     | 114     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       |  | 0       | 0       | 0       |   |
| 16   | Wingecarribee Shire Council       | 4,070  | 4,977   | 5,448   | 4,535   | 157  | 186     | 200     | 178     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 17   | Queanbeyan City Council           | 3,893  | 3,830   | 3,995   | 0       | 185  | 175     | 178     | 173     | 4  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 18   | Dubbo City Council                | 5,984  | 9,338   | 8,655   | 8,379   | 249  | 368     | 350     | 327     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 19   | Orange City Council               | 3,672  | 4,282   | 4,241   | 4,481   |  | 180     | 174     | 170     | 379  | 378     | 228     | 206     | 2  | 0       | 0       | 0       | 2  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 21   | Bathurst Regional Council         | 5,230  | 5,988   | 5,984   | 5,951   | 180  | 260     | 227     | 225     | 1,497  | 1,497   | 1,497   | 1,497   | 3  | 2       | 6       | 6       | 3  | 2       | 6       | 6       |  |         | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 22   | Lismore City Council              | 3,184  | 3,011   | 3,188   | 0       | 143  | 145     | 155     | 155     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 23   | Bega Valley Shire Council         | 3,291  | 3,950   | 3,429   | 3,037   | 130  | 139     | 134     | 137     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 24   | Ballina Shire Council             | 3,405  | 3,741   | 3,859   | 98      | 166  | 177     | 194     | 181     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       |   |
| 25   | Kempsey Shire Council             | 3,333  | 3,479   | 3,687   | 3,743   | 143  | 156     | 157     | 155     |  |         | 0       | 0       | 16   | 33      | 31      | 27      | 16   | 33      | 31      | 27      | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 26   | Essential Energy                  | 4,469  | 5,233   | 5,177   | 4,695   | 237  | 285     | 281     | 257     |  |         |         |         | 0  | 0       | 0       | 0       |  | 0       | 0       | 0       |  |         |         |         |  | 0       | 0       |         |   |
| 27   | Byron Shire Council               | 2,706  | 2,767   | 2,851   | 440     | 168  | 176     | 181     | 180     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 28A  | Goldenfields Water (Reticulation) | 4,364  | 5,412   | 6,088   | 290     | 199  | 265     | 287     | 275     |  |         | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 84   | 96      | 0       | 0       |  |         |         |         |   |
| 28B  | Goldenfields Water (Bulk Water Su | 8,020  | 9,157   | 9,315   | 9,151   |  |         |         |         |  |         |         |         | 7,301  | 8,667   | 8,875   | 8,988   | 7,301  | 8,667   | 8,875   | 8,988   | 0  |         | 0       | 0       |  |         |         |         |   |
| 20   | Goulburn Mulwaree Council         | 2,301  | 2,603   | 2,788   | 2,546   | 138  | 150     | 165     | 139     |  |         | 0       | 0       | 0  | 1       | 2       | 2       | 2  | 1       | 2       | 2       | 2  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| 9  | Wagga Wagga Council               |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |  |         |         |         |   |
| LWU Range Max                              |                                   | 15218  | 15,893  | 16,532  | 15,591  | 256  | 368     | 350     | 327     | 4198   | 4198    | 4198    | 4,198   | 9293   | 9708    | 10045   | 9,869   | 9293   | 9,708   | 10,045  | 9,869   | 954  | 1,599   | 3,122   | 2,042   | 0  | 0       | 0       | 0       |   |
| LWU Range Min                              |                                   | 1366   | 2,309   | 2,615   | 0       | 104  | 116     | 119     | 114     | 4  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |
| Median of NMU Indicators<br>shown in Table |                                   | 5230   | 5,809   | 6,036   | 5,868   | 157  | 175     | 174     | 170     | 379  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       |   |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY            |                                 | WATER RESOURCES   |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
|--------------------------|---------------------------------|---|---------|---------|---------|--|---------|---------|---------|------------------------------------|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|-----------------------------------|---------|---------|---------|-------------------------------|---------|---------|---------|
|                          |                                 | SEWAGE COLLECTED  |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
|                          |                                 | Volume of sewage collected - Residential, nonresidential and nontrade waste |         |         |         | Volume of sewage collected - trade waste |         |         |         | Total Sewage collected             |         |         |         | Volume of sewage supplied to other infrastructure operators |         |         |         | Volume of sewage taken from other infrastructure operators |         |         |         | Volume of sewage taken from sewer mining |         |         |         | Volume of sewage measured at inlet to treatment works |         |         |         | Volume of treated sewage effluent |         |         |         | Sewage collected per property |         |         |         |
|                          |                                 | W16<br>Includes infiltration  |         |         |         | W17                                      |         |         |         | W18<br>W18=W16+W17<br>Excludes W13 |         |         |         | W18.1   |         |         |         | W18.2  |         |         |         | W18.3                                    |         |         |         | W18.4   |         |         |         | W18.5                             |         |         |         | W19<br>W19=W18/C8             |         |         |         |
|                          |                                 | (ML)  |         |         |         | (ML)                                     |         |         |         | (ML)                               |         |         |         | (ML)  |         |         |         | (ML)   |         |         |         | (ML)                                     |         |         |         | (ML)  |         |         |         | (ML)                              |         |         |         | (kL/property)                 |         |         |         |
|                          |                                 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                                  | 2012/13 | 2013/14 | 2014/15 | 2011/12                            | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                           | 2012/13 | 2013/14 | 2014/15 | 2011/12                       | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation |                                 | 563,484   | 473,726 | 448,104 | 541,607 | 24,613                                   | 22,849  | 21,475  | 22,817  | 588,097                            | 496,575 | 469,579 | 564,424 | 803   | 1,245   | 1,237   | 1,208   | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 561,000   | 480,359 | 464,586 | 532,742 | 578,676                           | 494,241 | 478,591 | 547,195 | 334                           | 277     | 261     | 309     |
| Hunter Water Corporation |                                 | 76,388  | 63,400  | 59,904  | 67,136  | 4,389                                    | 4,697   | 4,974   | 4,702   | 80,777                             | 68,097  | 64,878  | 71,838  | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 80,777  | 68,097  | 64,878  | 71,838  | 80,777                            | 68,097  | 64,878  | 71,838  | 369                           | 308     | 289     | 316     |
| Water NSW                |                                 |   |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
| 1                        | Gosford City Council            | 15,769  | 14,836  | 14,901  | 18,774  | 838                                      | 906     | 691     | 662     | 16,607                             | 15,742  | 15,592  | 19,436  | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 16,607  | 15,742  | 15,592  | 19,436  | 16,607                            | 15,658  | 15,575  | 19,424  | 242                           | 228     | 223     | 278     |
| 2                        | Wyong Shire Council             | 17,423  | 16,287  | 14,835  | 15,955  |  |         |         |         | 17,423                             | 16,287  | 14,835  | 15,955  | 200   | 225     | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 17,423  | 16,062  | 14,835  | 15,955  | 17,614                            | 15,157  | 14,846  | 16,411  | 292                           | 273     | 246     | 258     |
| 3                        | Shoalhaven City Council         | 8,404   | 7,361   | 8,257   | 9,195   | 121                                      | 127     | 127     | 192     | 8,525                              | 7,488   | 8,384   | 9,387   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 8,525   | 7,488   | 8,384   | 9,387   | 8,522                             | 7,314   | 8,543   | 8,298   | 209                           | 182     | 200     | 224     |
| 4                        | Rous Water                      |   |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
| 5                        | MidCoast Water                  | 7,669   | 6,325   | 5,399   | 6,541   | 149                                      | 230     | 259     | 309     | 7,818                              | 6,555   | 5,658   | 6,850   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 7,818   | 6,555   | 5,658   | 6,850   | 7,817                             | 6,608   | 5,639   | 6,849   | 225                           | 188     | 161     | 195     |
| 6                        | Tweed Shire Council             | 7,991   | 7,678   | 6,466   | 7,841   | 595                                      | 228     | 238     | 264     | 8,586                              | 7,906   | 6,704   | 8,105   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 8,586   | 7,906   | 6,704   | 8,105   | 8,585                             | 7,904   | 6,621   | 8,011   | 277                           | 263     | 221     | 263     |
| 7                        | Port Macquarie Hastings Council | 9,664   | 8,706   | 8,476   | 7,850   |  |         |         |         | 9,664                              | 8,706   | 8,476   | 7,850   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 9,664   | 8,706   | 8,476   | 7,850   | 9,664                             | 8,526   | 8,476   | 7,850   | 359                           | 319     | 308     | 282     |
| 8                        | Riverina Water                  |   |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
| 10                       | Coffs Harbour City Council      | 7,338   | 6,878   | 5,370   | 7,360   |  |         |         |         | 7,338                              | 6,878   | 5,370   | 7,360   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 7,338   | 6,878   | 5,370   | 7,360   | 6,176                             | 7,314   | 5,626   | 7,353   | 315                           | 294     | 228     | 310     |
| 11                       | Albury City Council             | 5,252   | 4,533   | 4,473   | 4,156   | 104                                      | 335     | 290     | 284     | 5,356                              | 4,624   | 4,477   | 4,440   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 5,356   | 4,624   | 4,477   | 4,440   | 5,356                             | 2,755   | 4,550   | 4,444   | 251                           | 214     | 204     | 185     |
| 12                       | Fish River Water                |   |         |         |         |  |         |         |         |                                    |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |                                   |         |         |         |                               |         |         |         |
| 13                       | Tamworth Regional Council       | 4,348   | 4,267   | 3,697   | 4,132   | 1,131                                    | 1,129   | 1,045   | 1,077   | 5,479                              | 5,396   | 4,742   | 5,209   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 5,479   | 5,396   | 4,742   | 5,209   | 5,479                             | 4,531   | 4,128   | 5,209   | 290                           | 282     | 245     | 265     |
| 14                       | Clarence Valley Council         | 3,276   | 3,240   | 2,473   | 2,804   | 67                                       | 66      | 52      | 52      | 3,343                              | 3,306   | 2,525   | 2,856   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,343   | 3,306   | 2,525   | 2,856   | 3,335                             | 3,454   | 2,528   | 2,856   | 229                           | 226     | 172     | 194     |
| 15                       | Eurobodalla Shire Council       | 3,204   | 3,084   | 3,068   | 3,401   | 83                                       | 77      | 73      | 76      | 3,287                              | 3,161   | 3,141   | 3,477   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,287   | 3,161   | 3,141   | 3,477   | 3,286                             | 3,161   | 3,140   | 3,477   | 184                           | 176     | 174     | 193     |
| 16                       | Wingecarribee Shire Council     | 4,701   | 3,908   | 3,289   | 5,054   | 205                                      | 234     | 215     | 148     | 4,906                              | 4,142   | 3,504   | 5,202   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,906   | 4,142   | 3,504   | 5,202   | 4,876                             | 3,981   | 3,537   | 5,194   | 334                           | 282     | 225     | 331     |
| 17                       | Queanbeyan City Council         |   |         |         |         |  |         |         |         |                                    |         |         |         | 0   | 0       | 0       | 22      | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,812   | 2,965   | 3,596   | 3,653   | 3,813                             | 2,692   | 3,240   | 3,675   |                               |         |         |         |
| 18                       | Dubbo City Council              | 2,759   | 2,641   | 2,613   | 2,659   | 161                                      | 154     | 183     | 140     | 2,920                              | 2,795   | 2,796   | 2,799   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 2,920   | 2,795   | 2,796   | 2,799   | 2,897                             | 2,610   | 1,958   | 2,766   | 186                           | 176     | 175     | 170     |
| 19                       | Orange City Council             | 4,293   | 3,852   | 3,564   | 3,723   | 208                                      | 236     | 209     | 206     | 4,501                              | 4,088   | 3,773   | 3,929   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,501   | 4,088   | 3,773   | 3,929   | 4,495                             | 4,059   | 3,796   | 3,620   | 284                           | 252     | 229     | 237     |
| 21                       | Bathurst Regional Council       | 4,319   | 4,133   | 4,016   | 3,664   | 549                                      | 529     | 597     | 452     | 4,868                              | 4,662   | 4,613   | 4,116   |   |         | 0       | 0       |  |         | 0       | 0       |  |         | 0       | 0       | 4,868   | 4,662   | 4,613   | 4,116   | 4,198                             | 4,788   | 3,942   | 3,731   | 325                           | 308     | 299     | 259     |
| 22                       | Lismore City Council            | 4,902   | 4,160   | 3,574   | 3,888   |  | 390     | 169     | 120     | 4,902                              | 4,550   | 3,743   | 4,008   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,902   | 4,550   | 3,743   | 4,008   | 4,484                             | 4,030   | 3,355   | 3,920   | 388                           | 359     | 293     | 313     |
| 23                       | Bega Valley Shire Council       | 2,309   | 1,890   | 2,105   | 2,244   |  |         |         |         | 2,309                              | 1,890   | 2,105   | 2,244   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 2,309   | 1,890   | 2,105   | 2,244   | 2,309                             | 1,795   | 2,016   | 2,244   | 189                           | 156     | 173     | 184     |
| 24                       | Ballina Shire Council           | 4,754   | 4,407   | 2,872   | 5,319   |  | 147     | 80      | 82      | 4,754                              | 4,554   | 2,952   | 5,401   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 4,754   | 4,554   | 2,952   | 5,401   | 4,746                             | 4,341   | 2,869   | 5,397   | 356                           | 331     | 210     | 383     |
| 25                       | Kempsey Shire Council           | 2,956   | 2,508   | 1,847   | 2,201   | 79                                       | 79      | 79      | 83      | 3,035                              | 2,587   | 1,926   | 2,283   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,035   | 2,587   | 1,926   | 2,283   | 3,033                             | 2,436   | 1,921   | 2,558   | 326                           | 277     | 198     | 233     |
| 26                       | Essential Energy                | 1,623   | 1,366   | 1,380   | 1,358   |  |         |         |         | 1,623                              | 1,366   | 1,380   | 1,358   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 1,623   | 1,366   | 1,380   | 1,358   | 1,623                             | 1,366   | 1,380   | 1,358   | 167                           | 140     | 142     | 140     |
| 27                       | Byron Shire Council             | 3,259   | 3,663   | 3,042   | 2,783   | 122                                      | 141     | 110     | 315     | 3,381                              | 3,804   | 3,152   | 3,098   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 3,381   | 3,804   | 3,15    |         |                                   |         |         |         |                               |         |         |         |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | WATER RESOURCES   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
|---|-----------------------------------|---|---------|---------|---------|---|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|---|---------|---------|---------|--|---------|---------|-----------------|---|---------|---------|---------|-------|----|
|   |                                   | USES OF RECYCLED WATER AND STORMWATER                           |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
|   |                                   | Volume of Recycled water supplied (Residential)                 |         |         |         | Volume of Recycled water supplied (Commercial, Industrial, Municipal)             |         |         |         | Volume of Recycled water supplied (Agricultural)  |         |         |         | Volume of Recycled water supplied (Environmental)  |         |         |         | Volume of Recycled water supplied (On-site)         |         |         |         | Volume of Recycled water supplied (Other)   |         |         |         | Volume of recycled water supplied - Managed Aquifer Recharge |         |         |                 | Total Recycled water supplied   |         |         |         |       |    |
|   |                                   | W20<br>Includes potable & non-potable.<br>Excludes sewer mining |         |         |         | W21<br>Includes to golf courses.<br>Excludes stormwater.<br>Includes sewer mining |         |         |         | W22<br>Includes crops, forestry & livestock.<br>Excludes Stormwater.<br>Includes sewer mining |         |         |         | W23<br>Exclude disposal if not beneficial use.<br>Exclude stormwater.<br>Include sewer mining. |         |         |         | W24<br>Exclude stormwater.<br>Include sewer mining. |         |         |         | W25<br>Include managed aquifer recharge W25.1,<br>non revenue water, losses and sewer mining. |         |         |         | W25.1  |         |         |                 | W26<br>W26=W20+W21+W22+W23+W24+W25<br>Includes sewer mining.<br>Excludes stormwater |         |         |         |       |    |
|   |                                   | (ML)  |         |         |         | (ML)  |         |         |         | (ML)  |         |         |         | (ML)   |         |         |         | (ML)  |         |         |         | (ML)  |         |         |         | (ML)   |         |         |                 | (ML)  |         |         |         |       |    |
|   |                                   | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15         | 2011/12   | 2012/13 | 2013/14 | 2014/15 |       |    |
| Sydney Water Corporation                |                                   | 1,873   | 2,064   | 2,137   | 2,138   | 9,683   | 10,544  | 10,205  | 9,682   | 5,187   | 5,175   | 5,400   | 4,795   | 13,362   | 15,142  | 14,990  | 11,779  | 15,823  | 14,026  | 14,211  | 14,680  | 0   | 0       | 0       | 0       | NA   | 0       | NA      | NA              | 45,929  | 46,951  | 46,943  | 43,075  |       |    |
| Hunter Water Corporation                |                                   | 0   | 0       | 0       | 0       | 1,643   | 1,644   | 2,274   | 2,858   | 2,824   | 2,445   | 2,441   | 1,562   | 0  | 0       | 0       | 0       | 198   | 180     | 180     | 180     | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 4,664   | 4,269   | 4,895   | 4,600   |       |    |
| Water NSW                               |                                   |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 1                                       | Gosford City Council              | 0000  |         |         |         | 14  | 28      | 18      | 13      | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0   | 257     | 0       | 0       | 0   | 0       | 0       | 0       | 14   | 6       | 0       | 0               | 0   | 0       | 271     | 28      | 32    | 19 |
| 2                                       | Wyong Shire Council               | 120   | 657     | 51      | 0       | 326   |         | 683     | 521     | 00  |         |         |         | 00   |         |         |         | 19  | 220     | 228     | 238     | 00  |         |         |         | 00   |         |         |                 | 465   | 877     | 962     | 759     |       |    |
| 3                                       | Shoalhaven City Council           | 0   | 0       | 0       | 0       | 38  | 292     | 644     | 178     | 671   | 1,670   | 1,708   | 1,527   | 0  | 0       | 0       | 0       | 35  | 30      | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 0   | 744     | 1,992   | 2,352   | 1,705 |    |
| 4                                       | Rous Water                        |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 5                                       | MidCoast Water                    | 0   | 0       | 0       | 0       | 0   | 133     | 519     | 585     | 282   | 664     | 821     | 650     | 0  | 0       | 0       | 0       | 0   | 51      | 99      | 93      | 0   | 0       | 0       | 0       | 0000   |         |         |                 | 282   | 848     | 1,439   | 1,327   |       |    |
| 6                                       | Tweed Shire Council               | 0   | 0       | 0       | 0       | 336   | 382     | 563     | 500     | 48  | 47      | 38      | 49      | 0  | 0       | 0       | 0       | 2   | 2       | 3       | 2       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 386   | 431     | 604     | 551     |       |    |
| 7                                       | Port Macquarie Hastings Council   | 0   | 0       | 0       | 0       | 94  | 189     | 289     | 299     | 200   | 53      | 67      | 80      | 0  | 0       | 0       | 0       | 0   | 0       | 7       | 7       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 294   | 242     | 363     | 386     |       |    |
| 8                                       | Riverina Water                    |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 10                                      | Coffs Harbour City Council        | 00  |         |         |         | 71  | 259     | 567     | 309     | 300   | 542     | 614     | 497     | 00   |         |         |         | 118   | 0       | 255     | 207     | 0   |         | 0       | 0       | 00   |         |         |                 | 489   | 801     | 1,436   | 1,013   |       |    |
| 11                                      | Albury City Council               | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 2,723   | 1,208   | 803     | 880     | 2,564  | 1,525   | 1,664   | 1,518   | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 5,287   | 2,733   | 2,468   | 2,398   |       |    |
| 12                                      | Fish River Water                  |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 13                                      | Tamworth Regional Council         | 00  |         |         |         | 00  |         |         |         | 3,622   | 3,595   | 4,068   | 4,278   | 00   |         |         |         | 0   |         | 60      | 0       | 0   |         | 0       | 0       | 00   |         |         |                 | 3,656   | 3,595   | 4,128   | 4,278   |       |    |
| 14                                      | Clarence Valley Council           | 0000  |         |         |         | 109   | 128     | 176     | 195     | 000   |         |         |         | 000  |         |         |         | 000   |         |         |         | 000   |         |         |         | 000  |         |         |                 | 109   | 128     | 176     | 195     |       |    |
| 15                                      | Eurobodalla Shire Council         | 0000  |         |         |         | 77  | 170     | 190     | 223     | 000   |         |         |         | 000  |         |         |         | 9   | 19      | 26      | 20      | 0   | 0       | 0       | 0       | 0000   |         |         |                 | 86  | 189     | 216     | 243     |       |    |
| 16                                      | Wingecarribee Shire Council       | 0   | 0       | 0       | 0       | 35  | 98      | 0       | 0       | 0   | 0       | 124     | 160     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 4       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 35              | 98  | 124     | 163     |         |       |    |
| 17                                      | Queanbeyan City Council           | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 0   | 0       | 37      |         |       |    |
| 18                                      | Dubbo City Council                | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 1,305   | 2,108   | 1,884   | 2,108   | 0  | 0       | 0       | 0       | 91  | 70      | 74      | 75      | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 1,396           | 2,178   | 1,958   | 2,183   |         |       |    |
| 19                                      | Orange City Council               | 0   | 0       | 0       | 0       | 2,218   | 1,573   | 2,903   | 2,826   | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0   | 108     | 44      | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 2,218           | 1,681   | 2,947   | 2,826   |         |       |    |
| 21                                      | Bathurst Regional Council         | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 4,198  | 4,062   | 3,197   | 3,059   | 126   | 726     | 745     | 653     | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 4,7883,9423,712 |   |         |         |         |       |    |
| 22                                      | Lismore City Council              | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   |         | 0       | 0       | 0  | 0       | 0       | 0       | 0   | 0       | 34      | 5       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 0   | 34      | 5       |         |       |    |
| 23                                      | Bega Valley Shire Council         | 0   | 0       | 0       | 0       | 408   | 484     | 461     | 367     | 77  | 196     | 165     | 79      | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 485             | 680   | 626     | 446     |         |       |    |
| 24                                      | Ballina Shire Council             | 0000  |         |         |         | 104   | 0       | 273     | 517     | 12800   |         |         |         | 000  |         |         |         | 400   |         |         |         | 000   |         |         |         | 000  |         |         |                 | 164   | 132     | 273     | 517     |       |    |
| 25                                      | Kempsey Shire Council             | 0   | 0       | 0       | 0       | 0   | 0       | 90      | 60      | 0   | 0       | 13      | 12      | 0  | 0       | 0       | 0       | 0   | 10      | 7       | 5       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 10  | 110     | 77      |         |       |    |
| 26                                      | Essential Energy                  | 00  |         |         |         | 416   | 629     | 709     | 776     | 00  |         |         |         | 00   |         |         |         | 00  |         |         |         | 00  |         |         |         | 00   |         |         |                 | 416   | 629     | 709     | 776     |       |    |
| 27                                      | Byron Shire Council               | 0   | 0       | 0       | 0       | 374   | 547     | 390     | 288     | 137   | 49      | 88      | 156     | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 511             | 596   | 478     | 444     |         |       |    |
| 28A                                     | Goldenfields Water (Reticulation) |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 28B                                     | Goldenfields Water (Bulk Water Su |   |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |  |         |         |                 |   |         |         |         |       |    |
| 20                                      | Goulburn Mulwaree Council         | 0   | 0       | 0       | 0       | 118   | 193     | 204     | 194     | 1,422   | 1,374   | 1,389   | 1,612   | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 1,540           | 1,567   | 1,593   | 1,806   |         |       |    |
| 9                                       | Wagga Wagga Council               | 0   | 0       | 0       | 0       | 184   | 331     | 251     | 249     | 253   | 224     | 225     | 247     | 5,532  | 4,988   | 5,047   | 5,116   | 2   | 0       | 0       | 8       | 0   | 0       | 0       | 0       |  |         |         |                 | 5,971   | 5,543   | 5,523   | 5,620   |       |    |
| LWU Range Max                           |                                   | 120   | 657     | 51      | 0       | 2,218   | 1,573   | 2,903   | 2,826   | 3,622   | 3,595   | 4,068   | 4,278   | 5,532  | 4,988   | 5,047   | 5,116   | 257   | 726     | 745     | 653     | 0   | 0       | 14      | 6       | 0  | 0       | 0       | 0               | 5,971   | 5,543   | 5,523   | 5,620   |       |    |
| LWU Range Min                           |                                   | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 0               | 0   | 0       | 5       |         |       |    |
| Median of NMU Indicators shown in Table |                                   | 0   | 0       | 0       | 0       | 77  | 152     | 228     | 209     | 137   | 53      | 53      | 64      | 0  | 0       | 0       | 0       | 0   | 0       | 2       | 1       | 0   | 0       | 0       | 0       | 0  | 0       | 0       | 416             | 655   | 668     | 655     |         |       |    |

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | WATER RESOURCES  |         |         |         |   |         |         |         |                                 |         |         |         |   |         |         |         |
|---|-----------------------------------|--|---------|---------|---------|---|---------|---------|---------|---------------------------------|---------|---------|---------|---|---------|---------|---------|
|   |                                   | USES OF RECYCLED WATER AND STORMWATER                                    |         |         |         |   |         |         |         |                                 |         |         |         |   |         |         |         |
|   |                                   | Recycled water (% of effluent recycled)                                  |         |         |         | Volume of urban stormwater supplied to other infrastructure operators |         |         |         | Volume of urban stormwater used |         |         |         | Total volume of treated and untreated sewage discharges from a sewage discharge point |         |         |         |
|   |                                   | W27  |         |         |         | W28.1   |         |         |         | W28.4                           |         |         |         | W29   |         |         |         |
|   |                                   | W27=(W26+W15-W6)/W18.5x100<br>Exclude bulk recycled purchased<br><br>(%) |         |         |         | (ML)  |         |         |         | (ML)                            |         |         |         | (ML)  |         |         |         |
|   |                                   | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                         | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   | 8  | 10      | 10      | 8       | NA  | NA      | NA      | NA      | NA                              | NA      | NA      | NA      | 548,619   | 468,005 | 451,791 | 520,859 |
| Hunter Water Corporation                |                                   | 6  | 6       | 8       | 6       | 0   | 0       | 0       | 0       | 0                               | 0       | 0       | 0       | 75,915  | 63,828  | 59,983  | 67,238  |
| Water NSW                               |                                   |  |         |         |         |   |         |         |         |                                 |         |         |         |   |         |         |         |
| 1                                       | Gosford City Council              | 2  | 0       | 0       | 0       |   |         |         |         | 0                               | 0       | 24      |         | 16,335  | 15,630  | 15,543  | 19,405  |
| 2                                       | Wyong Shire Council               | 3  | 6       | 7       | 5       |   |         |         |         | 0                               | 0       | 0       |         | 14,723  | 14,280  | 13,884  | 15,684  |
| 3                                       | Shoalhaven City Council           | 9  | 27      | 28      | 21      |   |         |         |         | 0                               | 0       | 0       | 0       | 8,200   | 5,322   | 6,191   | 6,589   |
| 4                                       | Rous Water                        |  |         |         |         |   |         |         |         | 0                               | 0       | 0       | 0       |   |         |         |         |
| 5                                       | MidCoast Water                    | 4  | 13      | 26      | 19      |   |         |         |         | 0                               | 0       | 0       | 0       | 7,352   | 5,760   | 4,200   | 5,494   |
| 6                                       | Tweed Shire Council               | 5  | 6       | 9       | 7       |   |         |         |         | 0                               | 0       | 0       | 0       | 8,209   | 7,473   | 6,017   | 7,459   |
| 7                                       | Port Macquarie Hastings Council   | 3  | 3       | 4       | 5       |   |         |         |         | 0                               | 0       | 0       | 0       | 9,410   | 8,284   | 8,113   | 7,464   |
| 8                                       | Riverina Water                    |  |         |         |         |   |         |         |         | 0                               | 0       | 0       | 0       |   |         |         |         |
| 10                                      | Coffs Harbour City Council        | 8  | 11      | 26      | 14      |   |         |         |         | 0                               | 0       | 0       | 0       | 7,266   | 6,513   | 4,190   | 6,340   |
| 11                                      | Albury City Council               | 99   | 59      | 54      | 54      |   |         |         |         | 0                               | 0       | 0       | 0       | 69  | 22      | 2,082   | 3,106   |
| 12                                      | Fish River Water                  |  |         |         |         |   |         |         |         | 0                               | 0       | 0       | 0       |   |         |         |         |
| 13                                      | Tamworth Regional Council         | 67   | 79      | 100     | 82      |   |         |         |         | 0                               | 0       | 0       | 0       | 5,162   | 936     | 0       | 0       |
| 14                                      | Clarence Valley Council           | 3  | 4       | 7       | 7       |   |         |         |         | 0                               | 0       | 0       | 0       | 3,365   | 3,326   | 2,352   | 2,536   |
| 15                                      | Eurobodalla Shire Council         | 3  | 6       | 7       | 7       |   |         |         |         | 0                               | 0       | 0       | 0       | 3,200   | 2,972   | 2,924   | 3,233   |
| 16                                      | Wingecarribee Shire Council       | 1  | 3       | 4       | 3       |   |         |         |         | 0                               | 0       | 0       | 0       | 4,876   | 3,883   | 3,413   | 4,967   |
| 17                                      | Queanbeyan City Council           | 0  | 0       | 1       | 1       |   |         |         |         | 0                               | 0       | 0       | 0       | 3,175   | 2,692   | 3,240   | 3,416   |
| 18                                      | Dubbo City Council                | 48   | 83      | 100     | 79      |   |         |         |         | 0                               | 0       | 0       | 0       | 895   | 432     | 0       | 376     |
| 19                                      | Orange City Council               | 49   | 41      | 78      | 78      |   |         |         |         | 0                               | 0       | 0       | 0       | 2,233   | 2,378   | 849     | 1,106   |
| 21                                      | Bathurst Regional Council         |  | 103     | 100     | 100     |   |         |         |         | 0                               | 0       | 0       | 0       | 4,198   | 0       | 0       | 0       |
| 22                                      | Lismore City Council              | 0  | 0       | 1       | 0       |   |         |         |         | 0                               | 0       | 0       | 0       | 3,408   | 4,030   | 3,321   | 3,451   |
| 23                                      | Bega Valley Shire Council         | 21   | 38      | 31      | 20      |   |         |         |         | 0                               | 0       | 0       | 0       | 1,730   | 1,115   | 1,390   | 1,681   |
| 24                                      | Ballina Shire Council             | 4  | 3       | 10      | 10      |   |         |         |         | 0                               | 0       | 0       | 0       | 4,590   | 4,209   | 2,596   | 5,123   |
| 25                                      | Kempsey Shire Council             | 0  | 0       | 6       | 3       |   |         |         |         | 0                               | 0       | 0       | 0       | 2,839   | 2,426   | 1,811   | 2,301   |
| 26                                      | Essential Energy                  | 26   | 46      | 51      | 57      |   |         |         |         | 0                               | 0       | 0       | 0       | 1,157   | 737     | 671     | 447     |
| 27                                      | Byron Shire Council               | 16   | 13      | 15      | 14      |   |         |         |         | 0                               | 0       | 0       | 0       | 2,747   | 3,954   | 2,648   | 2,689   |
| 28A                                     | Goldenfields Water (Reticulation) |  |         |         |         |   |         |         |         | 0                               | 0       | 0       | 0       |   |         |         |         |
| 28B                                     | Goldenfields Water (Bulk Water Su |  |         |         |         |   |         |         |         | 0                               | 0       | 0       | 0       |   |         |         |         |
| 20                                      | Goulburn Mulwaree Council         | 90   | 95      | 98      | 93      |   |         |         |         | 0                               | 0       | 0       | 0       | 296   | 92      | 34      | 44      |
| 9                                       | Wagga Wagga Council               | 97   | 97      | 97      | 97      |   |         |         |         |                                 |         |         |         | 190   | 191     | 200     | 202     |
| LWU Range Max                           |                                   | 99   | 103     | 100     | 100     |   |         |         |         | 0                               | 0       | 0       | 24      | 16,335  | 15,630  | 15,543  | 19,405  |
| LWU Range Min                           |                                   | 0  | 0       | 0       | 0       |   |         |         |         | 0                               | 0       | 0       | 0       | 69  | 0       | 0       | 0       |
| Median of NMU Indicators shown in Table |                                   | 5  | 12      | 20      | 14      |   |         |         |         | 0                               | 0       | 0       | 0       | 3,387   | 3,149   | 2,622   | 3,170   |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | ASSETS                                      |         |         |         |   |         |         |         |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
|---|-----------------------------------|---|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|-----------------------------------|---------|---------|---------|-------------------------------------|---------|---------|---------|--|---------|---------|---------|
|   |                                   | WATER ASSETS                                |         |         |         |   |         |         |         |  |         |         |         | SGE ASSETS                        |         |         |         |                                     |         |         |         |  |         |         |         |
|   |                                   | No. of WTWs providing <u>full</u> treatment |         |         |         | Length of Water Mains<br>(excluding source transfer mains & property connections) |         |         |         | Properties served per km of water main |         |         |         | Number of Sewage Treatment Plants |         |         |         | Length of sewerage mains & channels |         |         |         | Properties served per km of sewer main |         |         |         |
|   |                                   |   |         |         |         |   |         |         |         |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
|   |                                   | A1  |         |         |         | A2  |         |         |         | A3                                     |         |         |         | A4                                |         |         |         | A5                                  |         |         |         | A6                                     |         |         |         |
| (No.)                                   |                                   |   |         | (km)    |         |   |         | (no.)   |         |  |         | (no.)   |         |                                   |         | (km)    |         |                                     |         | (no.)   |         |  |         |         |         |
|   |                                   | 2011/12                                     | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 | 2011/12                           | 2012/13 | 2013/14 | 2014/15 | 2011/12                             | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   | 10  | 9       | 9       | 9       | 21,680  | 21,930  | 22,105  | 22,293  | 84                                     | 84      | 84      | 84      | 25                                | 24      | 24      | 26      | 24,768                              | 24,540  | 24,786  | 25,085  | 71                                     | 73      | 73      | 73      |
| Hunter Water Corporation                |                                   | 6   | 6       | 6       | 6       | 4,930   | 4,820   | 4,893   | 4,945   | 47                                     | 48      | 48      | 48      | 19                                | 19      | 19      | 19      | 4,792                               | 4,852   | 4,903   | 4,945   | 46                                     | 46      | 46      | 46      |
| Water NSW                               |                                   |   |         |         |         |   |         |         |         |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 1                                       | Gosford City Council              | 2   | 2       | 2       | 2       | 980   | 982     | 986     | 987     | 72                                     | 72      | 72      | 73      | 2                                 | 2       | 2       | 2       | 1,313                               | 1,314   | 1,320   | 1,325   | 52                                     | 52      | 53      | 53      |
| 2                                       | Wyong Shire Council               | 1   | 1       | 1       | 1       | 1,208   | 1,309   | 1,182   | 1,218   | 50                                     | 46      | 52      | 52      | 6                                 | 6       | 6       | 6       | 1,252                               | 1,202   | 1,212   | 1,212   | 48                                     | 50      | 50      | 51      |
| 3                                       | Shoalhaven City Council           | 4   | 4       | 4       | 4       | 1,487   | 1,489   | 1,492   | 1,510   | 31                                     | 31      | 31      | 31      | 12                                | 13      | 13      | 13      | 1,162                               | 1,168   | 1,169   | 1,217   | 35                                     | 35      | 36      | 34      |
| 4                                       | Rous Water                        | 2   | 2       | 2       | 2       | 402   | 402     | 405     | 441     |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 5                                       | MidCoast Water                    | 4   | 4       | 5       | 5       | 1,355   | 1,390   | 1,393   | 1,395   | 28                                     | 27      | 28      | 28      | 13                                | 13      | 13      | 13      | 1,072                               | 1,098   | 1,123   | 1,125   | 32                                     | 30      | 31      | 31      |
| 6                                       | Tweed Shire Council               | 3   | 3       | 3       | 3       | 701   | 702     | 713     | 716     | 45                                     | 45      | 45      | 45      | 7                                 | 8       | 8       | 8       | 678                                 | 691     | 700     | 706     | 46                                     | 44      | 43      | 44      |
| 7                                       | Port Macquarie Hastings Council   | 4   | 4       | 4       | 4       | 789   | 793     | 802     | 810     | 38                                     | 37      | 38      | 38      | 5                                 | 5       | 5       | 5       | 655                                 | 661     | 684     | 689     | 41                                     | 41      | 40      | 40      |
| 8                                       | Riverina Water                    | 17  | 17      | 17      | 2       | 1,648   | 1,648   | 1,652   | 1,660   | 18                                     | 18      | 18      | 18      |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 10                                      | Coffs Harbour City Council        | 2   | 2       | 2       | 2       | 652   | 652     | 676     | 621     | 38                                     | 38      | 37      | 40      | 5                                 | 5       | 5       | 5       | 668                                 | 689     | 693     | 701     | 35                                     | 34      | 34      | 34      |
| 11                                      | Albury City Council               | 1   | 1       | 1       | 1       | 571   | 583     | 594     | 599     | 40                                     | 40      | 40      | 43      | 4                                 | 4       | 4       | 4       | 499                                 | 511     | 519     | 548     | 43                                     | 42      | 42      | 44      |
| 12                                      | Fish River Water                  | 1   | 1       | 1       | 1       | 241   | 241     | 241     | 241     |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 13                                      | Tamworth Regional Council         | 5   | 5       | 5       | 5       | 667   | 676     | 707     | 640     | 31                                     | 31      | 30      | 34      | 4                                 | 4       | 4       | 4       | 524                                 | 542     | 555     | 554     | 36                                     | 35      | 35      | 36      |
| 14                                      | Clarence Valley Council           | 0   | 0       |         | 0       | 1,104   | 1,104   | 1,118   | 1,123   | 20                                     | 19      | 19      | 19      | 5                                 | 5       | 6       | 6       | 367                                 | 369     | 409     | 417     | 40                                     | 40      | 36      | 35      |
| 15                                      | Eurobodalla Shire Council         | 1   | 2       | 2       | 2       | 920   | 868     | 886     | 884     | 21                                     | 22      | 22      | 22      | 5                                 | 5       | 5       | 5       | 525                                 | 526     | 527     | 527     | 34                                     | 34      | 34      | 34      |
| 16                                      | Wingecarribee Shire Council       | 3   | 3       | 3       | 2       | 660   | 656     | 660     | 661     | 28                                     | 29      | 29      | 29      | 5                                 | 5       | 6       | 6       | 535                                 | 515     | 555     | 558     | 27                                     | 29      | 28      | 28      |
| 17                                      | Queanbeyan City Council           | 0   | 0       | 0       | 0       | 286   | 283     | 283     | 300     | 56                                     | 58      | 58      | 58      | 1                                 | 1       | 1       | 1       | 329                                 | 327     | 327     | 336     | 49                                     | 50      | 51      | 51      |
| 18                                      | Dubbo City Council                | 1   | 1       | 1       | 1       | 491   | 497     | 501     | 508     | 34                                     | 34      | 34      | 35      | 2                                 | 2       | 2       | 2       | 390                                 | 393     | 399     | 410     | 40                                     | 40      | 40      | 40      |
| 19                                      | Orange City Council               | 1   | 1       | 1       | 1       | 571   | 610     | 621     | 634     | 29                                     | 28      | 28      | 28      | 2                                 | 2       | 2       | 2       | 416                                 | 430     | 437     | 450     | 38                                     | 38      | 38      | 37      |
| 21                                      | Bathurst Regional Council         | 1   | 1       | 1       | 1       | 381   | 385     | 392     | 395     | 40                                     | 40      | 40      | 40      | 1                                 | 1       | 1       | 1       | 389                                 | 391     | 394     | 400     | 38                                     | 39      | 39      | 40      |
| 22                                      | Lismore City Council              | 0   | 0       | 0       | 0       | 343   | 343     | 343     | 343     | 41                                     | 42      | 42      | 42      | 3                                 | 3       | 3       | 3       | 348                                 | 359     | 359     | 359     | 36                                     | 35      | 36      | 36      |
| 23                                      | Bega Valley Shire Council         | 0   | 0       | 0       | 0       | 527   | 611     | 613     | 615     | 27                                     | 23      | 23      | 23      | 10                                | 10      | 10      | 10      | 409                                 | 401     | 401     | 401     | 30                                     | 30      | 30      | 30      |
| 24                                      | Ballina Shire Council             | 1   | 1       | 1       | 1       | 325   | 330     | 332     | 333     | 45                                     | 42      | 43      | 43      | 4                                 | 4       | 4       | 4       | 319                                 | 322     | 324     | 327     | 42                                     | 43      | 43      | 43      |
| 25                                      | Kempsey Shire Council             | 3   | 3       | 4       | 4       | 493   | 491     | 491     | 491     | 26                                     | 26      | 25      | 25      | 7                                 | 8       | 8       | 7       | 270                                 | 272     | 273     | 273     | 34                                     | 34      | 36      | 36      |
| 26                                      | Essential Energy                  | 3   | 3       | 3       | 3       |   | 382     | 382     | 382     | 28                                     | 28      | 28      | 28      | 2                                 | 2       | 2       | 2       | 248                                 | 246     | 246     | 246     | 39                                     | 40      | 40      | 40      |
| 27                                      | Byron Shire Council               | 1   | 1       | 1       | 1       | 237   | 237     | 237     | 239     | 46                                     | 47      | 47      | 47      | 4                                 | 4       | 4       | 4       | 239                                 | 248     | 248     | 251     | 44                                     | 42      | 42      | 42      |
| 28A                                     | Goldenfields Water (Reticulation) | 1   | 1       | 1       | 1       | 1,834   | 1,834   | 1,834   | 1,834   | 5                                      | 6       | 6       | 6       |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 28B                                     | Goldenfields Water (Bulk Water Su | 3   | 3       | 3       | 3       | 315   | 315     | 315     | 315     |  |         |         |         |                                   |         |         |         |                                     |         |         |         |  |         |         |         |
| 20                                      | Goulburn Mulwaree Council         | 2   | 2       | 2       | 2       | 274   | 279     | 281     | 282     | 39                                     | 36      | 37      | 40      | 2                                 | 2       | 2       | 2       | 277                                 | 283     | 283     | 285     | 37                                     | 34      | 37      | 38      |
| 9                                       | Wagga Wagga Council               |   |         |         |         |   |         |         |         |  |         |         |         | 5                                 | 6       | 6       | 6       | 596                                 | 599     | 623     | 626     | 42                                     | 43      | 42      | 43      |
| LWU Range Max                           |                                   | 17  | 17      | 17      | 5       | 1,834   | 1,834   | 1,834   | 1,834   | 72                                     | 72      | 72      | 73      | 13                                | 13      | 13      | 13      | 1,313                               | 1,314   | 1,320   | 1,325   | 52                                     | 52      | 53      | 53      |
| LWU Range Min                           |                                   | 0   | 0       | 0       | 0       | 237   | 237     | 237     | 239     | 5                                      | 6       | 6       | 6       | 1                                 | 1       | 1       | 1       | 239                                 | 246     | 246     | 246     | 27                                     | 29      | 28      | 28      |
| Median of NMU Indicators shown in Table |                                   | 2   | 2       | 2       | 2       | 571   | 611     | 617     | 618     | 34                                     | 34      | 34      | 35      | 5                                 | 5       | 5       | 5       | 458                                 | 471     | 478     | 489     | 39                                     | 40      | 39      | 39      |



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| WATER UTILITY                           |                                   | ASSETS                              |         |         |         |                                    |         |         |         |                                 |         |         |         |                               |         |         |         |  |         |         |         |  |         |         |         |
|---|-----------------------------------|-------------------------------------|---------|---------|---------|------------------------------------|---------|---------|---------|---------------------------------|---------|---------|---------|-------------------------------|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|
|   |                                   | WATER ASSETS                        |         |         |         |                                    |         |         |         |                                 |         |         |         |                               |         |         |         | SGE ASSETS   |         |         |         |  |         |         |         |
|   |                                   | Water main breaks per 100km of main |         |         |         | Infrastructure Leakage Index (ILI) |         |         |         | Real lossses (L/connection/day) |         |         |         | Real lossses (kL/km main/day) |         |         |         | Sge Main Breaks and chokes per 100km of main (excludes property connections) |         |         |         | Property Connection Breaks and chokes per 1000 props |         |         |         |
|   |                                   | A8                                  |         |         |         | A9                                 |         |         |         | A10                             |         |         |         | A11                           |         |         |         | A14  |         |         |         | A15  |         |         |         |
|   |                                   | (no./100km)                         |         |         |         |                                    |         |         |         | (L/connection/day)              |         |         |         | (kL/km main/day)              |         |         |         | (per 100km of main)  |         |         |         | (per 1000 properties)                                |         |         |         |
|   |                                   | 2011/12                             | 2012/13 | 2013/14 | 2014/15 | 2011/12                            | 2012/13 | 2013/14 | 2014/15 | 2011/12                         | 2012/13 | 2013/14 | 2014/15 | 2011/12                       | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   | 22                                  | 29      | 30      | 26      | 1.5                                | 1.5     | 1.4     | 1.3     | 85                              | 87      | 81      | 74      | 6                             | 6       | 5       | 5       | 48   | 46      | 61      | 69      | 0  | 0       | 0       | 0       |
| Hunter Water Corporation                |                                   | 25                                  | 32      | 30      | 29      | 1.1                                | 1.1     | 1.2     | 1.3     | 75                              | 75      | 82      | 91      | 3                             | 3       | 4       | 4       | 47   | 42      | 54      | 54      | 9  | 9       | 10      | 10      |
| Water NSW                               |                                   |                                     |         |         |         |                                    |         |         |         |                                 |         |         |         |                               |         |         |         |  |         |         |         |  |         |         |         |
| 1                                       | Gosford City Council              | 27                                  | 23      | 22      | 17      | 1.0                                | 1.0     | 1.4     | 1.0     | 36                              | 32      | 116     | 64      | 2                             | 2       | 7       | 4       | 36   | 38      | 37      | 39      | 4  | 4       | 5       | 5       |
| 2                                       | Wyong Shire Council               | 8                                   | 10      | 17      | 17      | 1.0                                | 1.0     | 1.0     | 1.0     | 30                              | 33      | 34      | 33      | 1                             | 2       | 2       | 2       | 55   | 46      | 54      | 49      | 1  | 1       | 1       | 2       |
| 3                                       | Shoalhaven City Council           | 10                                  | 10      | 10      | 8       | 1.0                                | 1.0     | 1.0     | 1.1     | 37                              | 43      | 57      | 92      | 1                             | 1       | 2       | 3       | 13   | 14      | 8       | 11      | 0  | 1       | 0       | 0       |
| 4                                       | Rous Water                        | 9                                   | 36      | 12      | 10      |                                    |         |         |         |                                 |         |         |         | 6                             | 3       | 3       | 1       |  |         |         |         |  |         |         |         |
| 5                                       | MidCoast Water                    | 5                                   | 8       | 8       | 9       | 1.1                                | 1.0     | 1.0     | 1.0     | 84                              | 57      | 57      | 61      | 2                             | 1       | 2       | 2       | 6  | 6       | 6       | 6       |  |         |         |         |
| 6                                       | Tweed Shire Council               | 5                                   | 4       | 8       | 4       | 1.0                                | 1.0     | 1.0     | 1.0     | 56                              | 58      | 61      | 56      | 2                             | 2       | 2       | 2       | 8  | 2       | 1       | 0       | 1  | 0       | 0       | 0       |
| 7                                       | Port Macquarie Hastings Council   | 2                                   | 3       | 2       | 3       | 1.2                                | 1.0     | 1.0     | 1.0     | 62                              | 37      | 37      | 45      | 2                             | 1       | 1       | 2       |  |         |         |         |  |         |         |         |
| 8                                       | Riverina Water                    | 14                                  | 14      | 19      | 7       | 1.0                                | 1.0     | 1.0     | 1.0     | 64                              | 81      | 81      | 86      | 1                             | 2       | 2       | 2       |  |         |         |         |  |         |         |         |
| 10                                      | Coffs Harbour City Council        | 9                                   | 10      | 3       | 3       | 1.0                                | 1.0     | 1.0     | 1.0     | 60                              | 75      | 63      | 50      | 2                             | 3       | 2       | 2       | 43   | 65      | 76      | 89      | 10   | 13      | 3       | 4       |
| 11                                      | Albury City Council               | 6                                   | 8       | 10      | 5       | 1.3                                | 1.0     | 1.0     | 1.0     | 50                              | 56      | 57      | 55      | 2                             | 2       | 2       | 2       |  | 67      | 75      | 65      |  | 12      | 10      | 13      |
| 12                                      | Fish River Water                  | 4                                   | 5       | 8       | 6       |                                    |         |         |         |                                 |         |         |         | 6                             | 16      | 19      | 18      |  |         |         |         |  |         |         |         |
| 13                                      | Tamworth Regional Council         | 13                                  | 8       | 7       | 14      | 2.7                                | 3.0     | 3.2     | 2.6     | 74                              | 83      | 91      | 69      | 2                             | 3       | 3       | 2       | 79   | 77      | 74      | 50      | 1  | 3       | 9       | 2       |
| 14                                      | Clarence Valley Council           | 10                                  | 12      | 13      | 11      |                                    | 1.0     | 1.2     | 1.1     |                                 | 104     | 127     | 111     |                               | 2       | 2       | 2       | 29   | 43      | 45      | 52      | 16   | 11      | 10      | 4       |
| 15                                      | Eurobodalla Shire Council         |                                     | 11      | 13      | 13      | 1.0                                | 1.0     | 1.0     | 1.0     | 59                              | 50      | 50      | 48      | 1                             | 1       | 1       | 1       |  | 29      | 30      | 32      |  | 6       | 5       | 6       |
| 16                                      | Wingecarribee Shire Council       | 6                                   | 6       | 12      | 5       | 1.0                                | 1.4     | 1.5     | 1.0     | 74                              | 122     | 133     | 61      | 2                             | 3       | 4       | 2       | 25   | 44      | 46      | 22      | 8  | 9       | 7       | 9       |
| 17                                      | Queanbeyan City Council           | 23                                  | 5       | 2       | 6       | 1.7                                | 1.4     | 1.3     | 1.0     | 87                              | 123     | 102     | 81      | 4                             | 5       | 5       | 3       | 57   | 52      | 55      | 61      | 0  | 0       | 0       | 0       |
| 18                                      | Dubbo City Council                | 3                                   | 4       | 4       | 5       | 1.3                                | 2.1     | 2.5     | 2.4     | 65                              | 101     | 124     | 118     | 2                             | 3       | 4       | 4       | 36   | 43      | 42      | 46      | 11   | 15      | 13      | 8       |
| 19                                      | Orange City Council               |                                     | 9       | 9       | 7       |                                    | 1.0     | 1.0     | 1.0     |                                 | 64      | 60      | 61      |                               | 2       | 2       | 2       | 19   | 15      | 24      | 33      | 7  | 1       | 5       | 10      |
| 21                                      | Bathurst Regional Council         | 8                                   | 5       | 8       | 7       |                                    |         |         |         |                                 |         |         |         |                               |         |         |         | 64   | 58      | 84      | 99      | 3  | 3       | 3       | 2       |
| 22                                      | Lismore City Council              | 10                                  | 25      | 37      | 20      | 1.0                                | 1.0     | 1.0     | 1.0     | 46                              | 37      | 39      | 40      | 2                             | 1       | 2       | 2       | 101  | 55      | 49      | 50      | 12   | 6       | 9       | 10      |
| 23                                      | Bega Valley Shire Council         | 4                                   | 8       | 9       | 6       | 1.0                                | 2.1     | 1.0     | 1.0     | 54                              | 143     | 50      | 50      | 1                             | 3       | 1       | 1       | 10   | 9       | 22      | 9       |  | 3       | 3       | 1       |
| 24                                      | Ballina Shire Council             | 2                                   | 12      | 6       | 5       | 2.1                                | 2.7     | 2.5     | 2.7     | 121                             | 156     | 145     | 156     | 5                             | 6       | 6       | 6       | 10   | 8       | 20      | 3       | 1  | 2       | 2       | 0       |
| 25                                      | Kempsey Shire Council             | 9                                   | 7       | 10      | 7       | 1.0                                | 1.0     | 1.6     | 1.6     | 48                              | 50      | 96      | 97      | 1                             | 1       | 2       | 2       | 11   | 24      | 16      | 33      |  | 10      | 14      | 10      |
| 26                                      | Essential Energy                  |                                     | 24      | 17      | 14      | 1.6                                | 1.7     | 1.5     | 1.4     | 98                              | 102     | 90      | 82      |                               | 3       | 3       | 2       | 102  | 128     | 115     | 129     | 40   | 36      | 37      | 41      |
| 27                                      | Byron Shire Council               | 7                                   | 7       | 9       | 9       | 1.7                                | 1.6     | 1.4     | 1.2     | 63                              | 78      | 68      | 53      | 3                             | 3       | 3       | 2       | 20   | 32      | 11      | 11      | 9  | 10      | 8       | 8       |
| 28A                                     | Goldenfields Water (Reticulation) | 21                                  | 21      | 10      | 13      | 1.0                                | 1.0     | 1.0     | 1.0     | 74                              | 91      | 92      | 91      | 0                             | 1       | 1       | 1       |  |         |         |         |  |         |         |         |
| 28B                                     | Goldenfields Water (Bulk Water Su | 0                                   | 0       | 0       | 0       |                                    |         |         |         |                                 |         |         |         | 6                             | 4       | 4       | 4       |  |         |         |         |  |         |         |         |
| 20                                      | Goulburn Mulwaree Council         |                                     | 11      | 11      | 10      |                                    | 1.0     | 1.0     | 1.0     |                                 | 68      | 82      | 70      |                               | 2       | 3       | 3       |  |         |         |         |  | 13      | 5       | 7       |
| 9                                       | Wagga Wagga Council               |                                     |         |         |         |                                    |         |         |         |                                 |         |         |         |                               |         |         |         | 75   | 88      | 80      | 80      | 18   | 17      | 21      | 15      |
| LWU Range Max                           |                                   | 27                                  | 36      | 37      | 20      | 2.7                                | 3.0     | 3.2     | 2.7     | 121                             | 156     | 145     | 156     | 6                             | 16      | 19      | 18      | 102  | 128     | 115     | 129     | 40   | 36      | 37      | 41      |
| LWU Range Min                           |                                   | 0                                   | 0       | 0       | 0       | 1.0                                | 1.0     | 1.0     | 1.0     | 30                              | 32      | 34      | 33      | 0                             | 1       | 1       | 1       | 6  | 2       | 1       | 0       | 0  | 0       | 0       | 0       |
| Median of NMU Indicators shown in Table |                                   | 8                                   | 9       | 9       | 7       | 1.0                                | 1.0     | 1.0     | 1.0     | 62                              | 72      | 75      | 63      | 2                             | 2       | 2       | 2       | 33   | 43      | 44      | 43      | 7  | 6       | 5       | 5       |

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| WATER UTILITY |   | ENVIRONMENTAL                       |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
|---------------|---|-------------------------------------|---------|---------|---------|---|---------|---------|---------|---------------------------------|---------|---------|---------|------------------|---------|---------|---------|
|               |   | SEWAGE TREATMENT LEVELS             |         |         |         |   |         |         |         |                                 |         |         |         | BIOSOLIDS        |         |         |         |
|               |   | % sge treated to primary level only |         |         |         | % sge treated to secondary level (but not tertiary) |         |         |         | % sge treated to tertiary level |         |         |         | Biosolids reused |         |         |         |
|               |   | E1                                  |         |         |         | E2  |         |         |         | E3                              |         |         |         | E8               |         |         |         |
|               |   | (%)                                 |         |         |         | (%)   |         |         |         | (%)                             |         |         |         | (%)              |         |         |         |
|               |   | 2011/12                             | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                         | 2012/13 | 2013/14 | 2014/15 | 2011/12          | 2012/13 | 2013/14 | 2014/15 |
|               | Sydney Water Corporation                | 74                                  | 74      | 74      | 73      | 5   | 4       | 3       | 4       | 23                              | 22      | 23      | 23      | 100              | 100     | 100     | 100     |
|               | Hunter Water Corporation                | 0                                   | 0       | 0       | 0       | 56  | 56      | 57      | 53      | 44                              | 44      | 43      | 47      | 86               | 92      | 85      | 89      |
|               | Water NSW                               |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 1             | Gosford City Council                    | 2                                   | 1       | 0       | 1       | 97  | 97      | 98      | 97      | 2                               | 2       | 2       | 1       | 100              | 100     | 100     | 100     |
| 2             | Wyong Shire Council                     | 0                                   | 0       | 0       | 0       | 96  | 95      | 94      | 98      | 4                               | 5       | 7       | 5       | 85               | 100     | 100     | 100     |
| 3             | Shoalhaven City Council                 | 0                                   | 0       | 0       | 0       | 38  | 0       | 0       | 0       | 62                              | 100     | 89      | 88      | 100              | 100     | 100     | 100     |
| 4             | Rous Water                              |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 5             | MidCoast Water                          | 0                                   | 0       | 0       | 0       | 16  | 19      | 17      | 18      | 84                              | 81      | 83      | 82      | 100              | 100     | 100     | 100     |
| 6             | Tweed Shire Council                     | 0                                   | 0       | 0       | 0       | 1   | 1       | 1       | 1       | 99                              | 99      | 98      | 98      | 100              | 100     | 87      | 100     |
| 7             | Port Macquarie Hastings Council         | 0                                   | 0       | 0       | 0       | 0   | 1       | 0       | 0       | 100                             | 99      | 100     | 100     | 100              | 100     | 100     | 100     |
| 8             | Riverina Water                          |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 10            | Coffs Harbour City Council              | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 100     | 100     | 100              | 100     | 100     | 100     |
| 11            | Albury City Council                     | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 100     | 100     | 0                | 0       | 0       | 0       |
| 12            | Fish River Water                        |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 13            | Tamworth Regional Council               | 0                                   | 0       | 0       | 0       | 100   | 100     | 100     | 100     | 0                               | 0       | 0       | 0       | 100              | 99      | 100     | 100     |
| 14            | Clarence Valley Council                 | 0                                   | 0       | 0       | 0       | 1   | 0       | 0       | 0       | 99                              | 100     | 100     | 100     | 100              | 40      | 58      | 97      |
| 15            | Eurobodalla Shire Council               | 0                                   | 0       | 1       | 1       | 6   | 6       | 5       | 5       | 94                              | 94      | 95      | 95      | 47               | 0       | 33      | 69      |
| 16            | Wingecarribee Shire Council             | 0                                   | 0       | 0       | 0       | 0   | 0       | 1       | 1       | 100                             | 100     | 98      | 99      | 0                | 0       | 0       | 0       |
| 17            | Queanbeyan City Council                 | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 100     | 100     | 0                | 0       | 0       | 0       |
| 18            | Dubbo City Council                      | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 99      | 99      | 64               | 100     | 100     | 100     |
| 19            | Orange City Council                     | 7                                   | 1       | 0       | 0       | 1   | 1       | 2       | 1       | 92                              | 98      | 99      | 91      | 100              | 100     | 100     | 0       |
| 21            | Bathurst Regional Council               | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 86      | 91      | 100              | 100     | 100     | 100     |
| 22            | Lismore City Council                    | 5                                   | 5       | 2       | 5       | 0   | 0       | 0       | 0       | 95                              | 95      | 98      | 93      | 0                | 0       | 0       | 0       |
| 23            | Bega Valley Shire Council               | 0                                   | 0       | 0       | 0       | 60  | 60      | 61      | 61      | 40                              | 40      | 39      | 39      | 0                | 0       | 0       | 0       |
| 24            | Ballina Shire Council                   | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 100     | 100     | 100              | 100     | 100     | 100     |
| 25            | Kempsey Shire Council                   | 0                                   | 0       | 0       | 0       | 21  | 22      | 28      | 0       | 79                              | 78      | 63      | 100     | 99               | 96      | 100     | 100     |
| 26            | Essential Energy                        | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 100                             | 100     | 100     | 100     | 0                | 0       | 0       | 0       |
| 27            | Byron Shire Council                     | 0                                   | 0       | 0       | 0       | 0   | 0       | 1       | 0       | 100                             | 100     | 96      | 100     | 100              | 100     | 100     | 100     |
| 28A           | Goldenfields Water (Reticulation)       |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 28B           | Goldenfields Water (Bulk Water Su       |                                     |         |         |         |   |         |         |         |                                 |         |         |         |                  |         |         |         |
| 20            | Goulburn Mulwaree Council               | 0                                   | 0       | 0       | 0       | 2   | 0       | 0       | 0       | 98                              | 100     | 100     | 100     | 0                | 0       | 0       | 0       |
| 9             | Wagga Wagga Council                     | 0                                   | 0       | 0       | 0       | 6   | 3       | 4       | 4       | 95                              | 97      | 97      | 97      | 100              | 100     | 100     | 100     |
|               | LWU Range Max                           | 7                                   | 5       | 2       | 5       | 100   | 100     | 100     | 100     | 100                             | 100     | 100     | 100     | 100              | 100     | 100     | 100     |
|               | LWU Range Min                           | 0                                   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 0                               | 0       | 0       | 0       | 0                | 0       | 0       | 0       |
|               | Median of NMU Indicators shown in Table | 0                                   | 0       | 0       | 0       | 1   | 0       | 1       | 0       | 99                              | 100     | 98      | 99      | 100              | 100     | 100     | 100     |

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| WATER UTILITY                           |  | ENVIRONMENTAL                 |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   |  |    |         |   |         |    |         |   |         |  |         |  |         |  |
|---|--|-------------------------------|-----|---------|-----|----------------------------------|-----|---------|-----|-----------------------------------|-----|---------|------|--------------------------------|-----|---------|-----|-------------------------------|---|---------|---|----------------------------------|---|---------|--|-----------------------------------|--|---------|---|-----------------------------------|---|---------|---|--|----|---------|---|---------|----|---------|---|---------|--|---------|--|---------|--|
|   |  | GREENHOUSE GAS WS & SGE       |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     | GREENHOUSE GAS WS & SGE BULK  |   |         |   |                                  |   |         |  |                                   |  |         |   | SEWER OVERFLOWS                   |   |         |   |  |    |         |   |         |    |         |   |         |  |         |  |         |  |
|   |  | Greenhouse emissions<br>WATER |     |         |     | Greenhouse emissions<br>SEWERAGE |     |         |     | Net greenhouse emissions<br>OTHER |     |         |      | TOTAL Net greenhouse emissions |     |         |     | Greenhouse emissions<br>WATER |   |         |   | Greenhouse emissions<br>SEWERAGE |   |         |  | Net greenhouse emissions<br>OTHER |  |         |   | TOTAL Net greenhouse<br>emissions |   |         |   | Sewer overflows reported to<br>environmental regulator |    |         |   |         |    |         |   |         |  |         |  |         |  |
|   |  | E9                            |     |         |     | E10                              |     |         |     | E11                               |     |         |      | E12                            |     |         |     | E9.1                          |   |         |   | E10.1                            |   |         |  | E11.1                             |  |         |   | E12.1                             |   |         |   | E13  |    |         |   |         |    |         |   |         |  |         |  |         |  |
|   |  | (t CO2 per 1,000 properties)  |     |         |     | (t CO2 per 1,000 properties)     |     |         |     | (t CO2 per 1,000 properties)      |     |         |      | (t CO2 per 1,000 properties)   |     |         |     | (t CO2 per ML)                |   |         |   | (t CO2 per ML)                   |   |         |  | (t CO2 per ML)                    |  |         |   | (t CO2 per ML)                    |   |         |   | (number per 100km of main)                             |    |         |   |         |    |         |   |         |  |         |  |         |  |
| 2011/12                                 |  | 2012/13                       |     | 2013/14 |     | 2014/15                          |     | 2011/12 |     | 2012/13                           |     | 2013/14 |      | 2014/15                        |     | 2011/12 |     | 2012/13                       |   | 2013/14 |   | 2014/15                          |   | 2011/12 |  | 2012/13                           |  | 2013/14 |   | 2014/15                           |   | 2011/12 |   | 2012/13  |    | 2013/14 |   | 2014/15 |    | 2011/12 |   | 2012/13 |  | 2013/14 |  | 2014/15 |  |
| Sydney Water Corporation                |  | 65                            | 66  | 69      | 63  | 163                              | 113 | 118     | 126 | -151                              | -91 | -99     | -102 | 72                             | 85  | 85      | 84  |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| Hunter Water Corporation                |  | 115                           | 114 | 116     | 103 | 310                              | 254 | 285     | 105 | 29                                | 25  | 24      | 17   | 438                            | 381 | 412     | 220 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| Water NSW                               |  |                               |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     | 0                             |   |         |   | 0                                | 0 | 0       |  |                                   |  |         | 0 |                                   |   |         | 0 | 0  | 0  |         |   |         |    |         |   |         |  |         |  |         |  |
| 1                                       | Gosford City Council                   | 129                           | 165 | 153     | 161 | 396                              | 253 | 229     | 284 | 24                                | 25  | 24      | 24   | 539                            | 438 | 401     | 462 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 3  | 3  | 2       | 2 |         |    |         |   |         |  |         |  |         |  |
| 2                                       | Wyong Shire Council                    | 211                           |     | 166     | 174 | 257                              |     | 264     | 290 | 23                                |     | 16      | 2    | 486                            |     | 441     | 459 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 1  | 2       | 6 |         |    |         |   |         |  |         |  |         |  |
| 3                                       | Shoalhaven City Council                | 205                           | 171 | 147     | 180 | 314                              | 280 | 253     | 282 | 7                                 | 5   | 5       | 6    | 489                            | 423 | 377     | 437 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 1  | 1       | 1 |         |    |         |   |         |  |         |  |         |  |
| 4                                       | Rous Water                             |                               |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     | 0                             |   |         |   | 0                                | 0 | 0       |  |                                   |  |         | 0 |                                   |   |         | 0 | 0  | 0  | 1       | 1 | 1       | 0  |         |   |         |  |         |  |         |  |
| 5                                       | MidCoast Water                         | 111                           | 149 | 219     | 226 | 177                              | 169 | 263     | 263 | 43                                | 38  | 26      | 25   | 315                            | 340 | 483     | 490 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 1  | 1       | 1 |         |    |         |   |         |  |         |  |         |  |
| 6                                       | Tweed Shire Council                    | 159                           | 172 | 175     | 155 | 292                              | 268 | 271     | 264 | 6                                 | 7   | 7       | 6    | 454                            | 434 | 441     | 413 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 1  | 2       | 0 |         |    |         |   |         |  |         |  |         |  |
| 7                                       | Port Macquarie Hastings Council        | 144                           | 166 | 146     | 178 | 87                               | 274 | 263     | 260 | 0                                 |     | 0       | 0    | 222                            | 417 | 386     | 416 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 1  | 1       | 1 |         |    |         |   |         |  |         |  |         |  |
| 8                                       | Riverina Water                         | 608                           | 351 | 353     | 364 |                                  |     |         |     | 16                                | 15  | 19      | 8    | 624                            | 365 | 372     | 372 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   |  |    |         |   |         |    |         |   |         |  |         |  |         |  |
| 10                                      | Coffs Harbour City Council             | 130                           | 98  | 103     | 109 | 339                              | 382 | 267     | 363 | 11                                | 55  | 6       | 35   | 460                            | 515 | 362     | 487 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 13 | 1       | 3 |         |    |         |   |         |  |         |  |         |  |
| 11                                      | Albury City Council                    | 284                           | 307 | 262     | 236 | 263                              | 253 | 203     | 168 | 0                                 |     | 0       | 1    | 528                            | 541 | 451     | 393 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 2  | 2       | 1 |         |    |         |   |         |  |         |  |         |  |
| 12                                      | Fish River Water                       |                               |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     |                               |   |         |   |                                  |   |         |  | 0                                 |  |         |   | 0                                 | 0 | 0       |   |  |    | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 13                                      | Tamworth Regional Council              | 169                           | 177 | 214     | 186 | 227                              | 223 | 227     | 228 | 0                                 |     | 0       | 0    | 374                            | 378 | 419     | 393 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 14                                      | Clarence Valley Council                | 26                            | 19  | 19      | 69  | 170                              | 139 | 139     | 74  |                                   |     |         |      | 137                            | 114 | 114     | 119 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 1 |         |    |         |   |         |  |         |  |         |  |
| 15                                      | Eurobodalla Shire Council              | 154                           | 162 | 159     | 136 | 198                              | 191 | 204     | 205 | 16                                | 14  | 16      | 35   | 351                            | 352 | 363     | 359 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 6  | 7  | 8       | 8 |         |    |         |   |         |  |         |  |         |  |
| 16                                      | Wingecarribee Shire Council            | 146                           | 183 | 230     | 162 | 274                              | 257 | 260     | 337 | 15                                | 13  | 23      | 30   | 377                            | 398 | 467     | 469 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 10   | 9  | 1       | 5 |         |    |         |   |         |  |         |  |         |  |
| 17                                      | Queanbeyan City Council                | 14                            | 20  | 15      | 13  | 84                               | 152 | 146     | 164 | 46                                | 18  | 7       | 7    | 143                            | 190 | 170     | 184 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 1  | 1       | 1 |         |    |         |   |         |  |         |  |         |  |
| 18                                      | Dubbo City Council                     | 239                           | 308 | 306     | 296 | 200                              | 232 | 204     | 207 | 3                                 | 3   | 2       | 2    | 429                            | 527 | 499     | 491 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 1  | 1       | 2 |         |    |         |   |         |  |         |  |         |  |
| 19                                      | Orange City Council                    | 209                           | 235 | 221     | 204 | 191                              | 182 | 199     | 207 | 6                                 |     | 5       | 5    | 390                            | 414 | 416     | 405 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 1       | 0 |         |    |         |   |         |  |         |  |         |  |
| 21                                      | Bathurst Regional Council              | 230                           | 192 | 172     | 158 | 285                              | 193 | 191     | 177 |                                   |     |         |      | 512                            | 384 | 362     | 337 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 22                                      | Lismore City Council                   | 15                            | 22  | 20      | 27  | 61                               | 196 | 242     | 220 | 13                                |     | 12      | 10   | 69                             | 210 | 248     | 233 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 0  | 1       | 1 |         |    |         |   |         |  |         |  |         |  |
| 23                                      | Bega Valley Shire Council              | 122                           |     | 118     | 107 | 126                              | 212 | 219     | 239 | 40                                | 29  | 39      | 32   | 193                            | 331 | 343     | 342 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 24                                      | Ballina Shire Council                  | 14                            | 15  | 13      | 13  | 363                              | 357 | 415     | 384 |                                   |     |         |      | 347                            | 366 | 425     | 390 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 6  | 1  | 0       | 1 |         |    |         |   |         |  |         |  |         |  |
| 25                                      | Kempsey Shire Council                  | 158                           | 180 | 198     | 162 | 243                              | 231 | 172     | 151 | 31                                | 26  | 16      | 44   | 368                            | 376 | 349     | 324 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 1  | 6  | 1       | 2 |         |    |         |   |         |  |         |  |         |  |
| 26                                      | Essential Energy                       | 509                           | 536 | 886     | 732 | 50                               | 84  | 48      | 50  |                                   |     |         |      | 572                            | 647 | 930     | 779 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 0  | 0  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 27                                      | Byron Shire Council                    | 12                            | 6   | 6       | 6   | 368                              | 169 | 172     | 169 |                                   |     |         |      | 363                            | 164 | 167     | 166 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 4  | 1  | 2       | 2 |         |    |         |   |         |  |         |  |         |  |
| 28A                                     | Goldenfields Water (Reticulation)      | 445                           |     | 390     | 378 |                                  |     |         |     | 18                                |     | 18      | 16   | 461                            |     | 407     | 394 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   |  |    |         |   |         |    |         |   |         |  |         |  |         |  |
| 28B                                     | Goldenfields Water (Bulk Water Supply) |                               |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     | 1                             |   |         |   | 1                                | 1 | 1       |  |                                   |  |         | 0 |                                   |   |         | 0 | 0  | 0  | 1       | 1 | 1       | 1  |         |   |         |  |         |  |         |  |
| 20                                      | Goulburn Mulwaree Council              |                               |     |         |     | 463                              | 493 | 472     | 346 | 22                                | 22  | 20      | 18   | 615                            |     | 618     | 449 |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   | 3  | 1  | 0       | 0 |         |    |         |   |         |  |         |  |         |  |
| 9                                       | Wagga Wagga Council                    |                               |     |         |     |                                  |     |         |     |                                   |     |         |      |                                |     |         |     |                               |   |         |   |                                  |   |         |  |                                   |  |         |   |                                   |   |         |   |  |    |         |   | 0       | 0  | 1       | 0 |         |  |         |  |         |  |
| LWU Range Max                           |  | 608                           | 536 | 886     | 732 | 463                              | 493 | 472     | 384 | 46                                | 55  | 39      | 44   | 624                            | 647 | 930     | 779 | 1                             | 1 | 1       | 1 |                                  |   |         |  |                                   |  |         |   | 0                                 |   |         |   | 0  | 0  | 1       | 1 | 1       | 10 | 13      | 8 | 8       |  |         |  |         |  |
| LWU Range Min                           |  | 12                            | 6   | 6       | 6   | 50                               | 84  | 48      | 50  | 3                                 | 0   | 0       | 0    | 69                             | 114 | 114     | 119 | 0                             | 0 | 0       | 0 |                                  |   |         |  |                                   |  |         |   | 0                                 |   |         |   | 0  | 0  | 0       | 0 | 0       | 0  | 0       | 0 |         |  |         |  |         |  |
| Median of NMU Indicators shown in Table |  | 154                           | 172 | 169     | 162 | 235                              | 231 | 227     | 228 | 16                                | 15  | 14      | 9    | 376                            | 398 | 401     | 394 | 1                             | 1 | 1       | 1 |                                  |   |         |  |                                   |  |         |   | 0                                 |   |         |   | 0  | 0  | 1       | 1 | 0       | 0  | 1       | 1 | 1       |  |         |  |         |  |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |  | CUSTOMERS                                  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
|---|--|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|---------------------------------------|---------|---------|---------|
|   |  | WS CUSTOMERS                               |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         | SGE CUSTOMERS                          |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
|   |  | Population receiving water supply services |         |         |         | Connected residential properties - water supply |         |         |         | Connected nonresidential properties - water supply |         |         |         | Total connected properties - water supply |         |         |         | Population receiving sewerage services |         |         |         | Connected residential properties - sewerage |         |         |         | Connected nonresidential properties - sewerage |         |         |         | Total connected properties - sewerage |         |         |         |
|   |  | C1   |         |         |         | C2  |         |         |         | C3   |         |         |         | C4  |         |         |         | C5                                     |         |         |         | C6  |         |         |         | C7   |         |         |         | C8                                    |         |         |         |
|   |  | ('000)                                     |         |         |         | ('000)  |         |         |         | ('000)   |         |         |         | ('000)                                    |         |         |         | ('000)                                 |         |         |         | ('000)                                      |         |         |         | ('000)   |         |         |         | ('000)                                |         |         |         |
|   |  | 2011/12                                    | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                   | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 | 2011/12                                     | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                               | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |  | 4,626                                      | 4,657   | 4,755   | 4,833   | 1,667   | 1,698   | 1,724   | 1,752   | 145  | 145     | 124     | 124     | 1,812                                     | 1,844   | 1,848   | 1,876   | 4,491                                  | 4,530   | 4,644   | 4,721   | 1,631                                       | 1,663   | 1,687   | 1,716   | 132  | 132     | 111     | 111     | 1,763                                 | 1,795   | 1,799   | 1,827   |
| Hunter Water Corporation                |  | 540  | 545     | 550     | 558     | 214   | 218     | 222     | 225     | 16   | 15      | 14      | 14      | 230                                       | 233     | 236     | 239     | 517                                    | 523     | 528     | 535     | 207   | 209     | 213     | 216     | 12   | 12      | 11      | 11      | 219                                   | 221     | 224     | 228     |
| Water NSW                               |  |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 1                                       | Gosford City Council                   | 163  | 163     | 165     | 166     | 67  | 68      | 68      | 68      | 3  | 3       | 3       | 4       | 71  | 71      | 72      | 72      | 159                                    | 159     | 161     | 162     | 66  | 66      | 67      | 67      | 3  | 3       | 3       | 3       | 69                                    | 69      | 70      | 70      |
| 2                                       | Wyong Shire Council                    | 145  | 150     | 154     | 156     | 58  | 58      | 59      | 61      | 3  | 2       | 2       | 3       | 61  | 61      | 61      | 64      | 143                                    | 148     | 152     | 154     | 57  | 57      | 58      | 59      | 3  | 3       | 3       | 3       | 60                                    | 60      | 60      | 62      |
| 3                                       | Shoalhaven City Council                | 93   | 90      | 89      | 89      | 43  | 44      | 44      | 44      | 3  | 3       | 3       | 3       | 46  | 47      | 47      | 47      | 83                                     | 79      | 79      | 81      | 39  | 39      | 40      | 40      | 2  | 2       | 2       | 2       | 41                                    | 41      | 42      | 42      |
| 4                                       | Rous Water                             |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 5                                       | MidCoast Water                         | 82   | 82      | 83      | 83      | 36  | 36      | 36      | 36      | 3  | 3       | 3       | 3       | 38  | 39      | 39      | 39      | 81                                     | 81      | 81      | 81      | 32  | 32      | 32      | 32      | 3  | 3       | 3       | 3       | 35                                    | 35      | 35      | 35      |
| 6                                       | Tweed Shire Council                    | 79   | 79      | 78      | 79      | 31  | 31      | 31      | 31      | 1  | 1       | 1       | 1       | 31  | 32      | 32      | 32      | 73                                     | 75      | 76      | 76      | 30  | 29      | 29      | 30      | 1  | 1       | 1       | 1       | 31                                    | 30      | 30      | 31      |
| 7                                       | Port Macquarie Hastings Council        | 80   | 80      | 81      | 81      | 27  | 27      | 27      | 28      | 3  | 3       | 3       | 3       | 30  | 30      | 30      | 30      | 73                                     | 74      | 75      | 78      | 25  | 25      | 26      | 26      | 2  | 2       | 2       | 2       | 27                                    | 27      | 28      | 28      |
| 8                                       | Riverina Water                         | 60   | 70      | 71      | 72      | 26  | 27      | 27      | 27      | 4  | 3       | 3       | 3       | 29  | 29      | 30      | 30      |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 10                                      | Coffs Harbour City Council             | 68   | 69      | 70      | 71      | 23  | 23      | 23      | 24      | 2  | 2       | 2       | 2       | 25  | 25      | 25      | 25      | 67                                     | 68      | 69      | 70      | 22  | 22      | 22      | 22      | 2  | 2       | 2       | 2       | 23                                    | 23      | 24      | 24      |
| 11                                      | Albury City Council                    | 53   | 49      | 50      | 51      | 21  | 21      | 22      | 24      | 2  | 2       | 2       | 2       | 23  | 23      | 24      | 26      | 53                                     | 48      | 48      | 49      | 20  | 20      | 20      | 22      | 2  | 2       | 2       | 2       | 21                                    | 22      | 22      | 24      |
| 12                                      | Fish River Water                       |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 13                                      | Tamworth Regional Council              | 44   | 44      | 45      | 45      | 19  | 19      | 19      | 20      | 2  | 2       | 2       | 2       | 21  | 21      | 21      | 22      | 44                                     | 44      | 45      | 45      | 17  | 18      | 18      | 18      | 2  | 2       | 2       | 2       | 19                                    | 19      | 19      | 20      |
| 14                                      | Clarence Valley Council                | 46   | 46      | 46      | 46      | 20  | 19      | 19      | 19      | 2  | 2       | 3       | 3       | 22  | 21      | 21      | 22      | 30                                     | 30      | 30      | 32      | 14  | 14      | 14      | 14      | 1  | 1       | 1       | 1       | 15                                    | 15      | 15      | 15      |
| 15                                      | Eurobodalla Shire Council              | 39   | 31      | 31      | 31      | 19  | 19      | 19      | 19      | 1  | 1       | 1       | 1       | 20  | 20      | 20      | 20      | 38                                     | 27      | 29      | 30      | 17  | 17      | 17      | 17      | 1  | 1       | 1       | 1       | 18                                    | 18      | 18      | 18      |
| 16                                      | Wingecarribee Shire Council            | 39   | 40      | 40      | 41      | 17  | 17      | 17      | 17      | 2  | 2       | 2       | 2       | 19  | 19      | 19      | 19      | 34                                     | 35      | 38      | 39      | 14  | 14      | 15      | 15      | 1  | 1       | 1       | 1       | 15                                    | 15      | 16      | 16      |
| 17                                      | Queanbeyan City Council                | 35   | 38      | 39      | 39      | 15  | 15      | 16      | 16      | 1  | 1       | 1       | 1       | 16  | 16      | 16      | 17      | 35                                     | 38      | 38      | 39      | 15  | 15      | 16      | 16      | 1  | 1       | 1       | 1       | 16                                    | 16      | 17      | 17      |
| 18                                      | Dubbo City Council                     | 34   | 35      | 35      | 35      | 15  | 15      | 15      | 16      | 2  | 2       | 2       | 2       | 17  | 17      | 17      | 18      | 33                                     | 33      | 35      | 35      | 14  | 14      | 15      | 15      | 1  | 1       | 1       | 1       | 16                                    | 16      | 16      | 16      |
| 19                                      | Orange City Council                    | 40   | 40      | 41      | 41      | 15  | 15      | 16      | 16      | 2  | 2       | 2       | 2       | 17  | 17      | 17      | 18      | 40                                     | 40      | 41      | 41      | 15  | 15      | 15      | 15      | 1  | 1       | 1       | 1       | 16                                    | 16      | 17      | 17      |
| 21                                      | Bathurst Regional Council              | 33   | 34      | 34      | 34      | 14  | 14      | 14      | 14      | 1  | 1       | 1       | 1       | 15  | 15      | 16      | 16      | 33                                     | 33      | 33      | 34      | 13  | 14      | 14      | 14      | 2  | 2       | 2       | 2       | 15                                    | 15      | 16      | 16      |
| 22                                      | Lismore City Council                   | 30   | 31      | 31      | 32      | 13  | 12      | 13      | 13      | 1  | 2       | 2       | 2       | 14  | 14      | 14      | 14      | 28                                     | 28      | 28      | 29      | 12  | 12      | 12      | 12      | 1  | 1       | 1       | 1       | 13                                    | 13      | 13      | 13      |
| 23                                      | Bega Valley Shire Council              | 29   | 24      | 24      | 25      | 13  | 13      | 13      | 13      | 1  | 1       | 1       | 1       | 14  | 14      | 14      | 14      | 23                                     | 21      | 21      | 21      | 11  | 11      | 11      | 11      | 1  | 1       | 1       | 1       | 12                                    | 12      | 12      | 12      |
| 24                                      | Ballina Shire Council                  | 37   | 37      | 38      | 38      | 13  | 13      | 13      | 13      | 1  | 1       | 1       | 1       | 15  | 14      | 14      | 14      | 35                                     | 36      | 36      | 37      | 12  | 12      | 13      | 13      | 1  | 1       | 2       | 1       | 13                                    | 14      | 14      | 14      |
| 25                                      | Kempsey Shire Council                  | 25   | 25      | 25      | 27      | 11  | 11      | 11      | 11      | 2  | 2       | 2       | 2       | 13  | 13      | 13      | 13      | 20                                     | 20      | 21      | 20      | 9   | 9       | 9       | 9       | 1  | 1       | 1       | 1       | 9                                     | 9       | 10      | 10      |
| 26                                      | Essential Energy                       | 19   | 19      | 19      | 19      | 10  | 10      | 10      | 10      | 1  | 1       | 1       | 1       | 11  | 11      | 11      | 11      | 19                                     | 19      | 19      | 19      | 9   | 9       | 9       | 9       | 1  | 1       | 1       | 1       | 10                                    | 10      | 10      | 10      |
| 27                                      | Byron Shire Council                    | 29   | 21      | 21      | 21      | 10  | 10      | 10      | 10      | 1  | 1       | 2       | 2       | 11  | 11      | 11      | 11      | 29                                     | 21      | 21      | 21      | 9   | 9       | 9       | 9       | 1  | 1       | 1       | 1       | 11                                    | 10      | 11      | 11      |
| 28A                                     | Goldenfields Water (Reticulation)      | 21   | 23      | 23      | 23      | 7   | 7       | 7       | 7       | 3  | 3       | 3       | 3       | 10  | 10      | 10      | 10      |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 28B                                     | Goldenfields Water (Bulk Water Supply) |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         |  |         |         |         |                                       |         |         |         |
| 20                                      | Goulburn Mulwaree Council              | 23   | 23      | 23      | 23      | 10  | 9       | 9       | 10      | 1  | 1       | 1       | 1       | 11  | 10      | 10      | 11      | 22                                     | 22      | 22      | 22      | 9   | 9       | 10      | 10      | 1  | 1       | 1       | 1       | 10                                    | 10      | 11      | 11      |
| 9                                       | Wagga Wagga Council                    |  |         |         |         |   |         |         |         |  |         |         |         |   |         |         |         | 62                                     | 61      | 62      | 63      | 24  | 24      | 25      | 25      | 2  | 2       | 2       | 2       | 25                                    | 26      | 26      | 27      |
| LWU Range Max                           |  | 163  | 163     | 165     | 166     | 67  | 68      | 68      | 68      | 4  | 3       | 3       | 4       | 71  | 71      | 72      | 72.0    | 159                                    | 159     | 161     | 162     | 66  | 66      | 67      | 67      | 3  | 3       | 3       | 3       | 69                                    | 69      | 70      | 70.0    |
| LWU Range Min                           |  | 19   | 19      | 19      | 19      | 7   | 7       | 7       | 7       | 1  | 1       | 1       | 1       | 10  | 10      | 10      | 10.0    | 19                                     | 19      | 19      | 19      | 9   | 9       | 9       | 9       | 1  | 1       | 1       | 1       | 9                                     | 9       | 10      | 10.0    |
| Median of NMU Indicators shown in Table |  | 39   | 40      | 40      | 41      | 17  | 17      | 17      | 17      | 2  | 2       | 2       | 2       | 19  | 19      | 19      | 19.0    | 37                                     | 37      | 38      | 39      | 15  | 15      | 16      | 16      | 1  | 1       | 1       | 1       | 16                                    | 16      | 17      | 17.0    |

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY            |                                   | COMPLAINTS & INTERRUPTIONS |         |         |         |                          |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |                          |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |
|--------------------------|-----------------------------------|----------------------------|---------|---------|---------|--------------------------|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|---|---------|---------|---------|---|---------|---------|---------|--------------------------|---------|---------|---------|---|---------|---------|---------|---|---------|---------|---------|--|---------|---------|---------|
|                          |                                   | WS                         |         |         |         |                          |         |         |         | SGE   |         |         |         | WS & SGE   |         |         |         |  |         |         |         | WS  |         |         |         | SGE                                       |         |         |         | WS                       |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |
|                          |                                   | Water quality complaints   |         |         |         | Water service complaints |         |         |         | Sewage service complaints<br>(including odour complaints) |         |         |         | Billing and account<br>complaints - water supply<br>& sewerage |         |         |         | Total water and sewerage<br>complaints |         |         |         | % of calls answered<br>by an operator within<br>30 secs |         |         |         | Av duration of unplanned<br>interruptions |         |         |         | Av sewerage interruption |         |         |         | Incidence of unplanned<br>interruptions - water |         |         |         | No. of restrictions applied<br>for non-payment of bills |         |         |         | No. of legal actions applied<br>for non-payment of bills |         |         |         |
|                          |                                   | C9                         |         |         |         | C10                      |         |         |         | C11   |         |         |         | C12  |         |         |         | C13                                    |         |         |         | C14   |         |         |         | C15                                       |         |         |         | C16                      |         |         |         | C17   |         |         |         | C18   |         |         |         | C19  |         |         |         |
|                          |                                   | (per 1000 properties)      |         |         |         | (per 1000 properties)    |         |         |         | (per 1000 properties)                                     |         |         |         | (per 1000 properties)  |         |         |         | (per 1000 properties)                  |         |         |         | (%)   |         |         |         | (min)                                     |         |         |         | (min)                    |         |         |         | (per 1000 props)                                |         |         |         | (per 1000 props)  |         |         |         | (per 1000 props)   |         |         |         |
|                          |                                   | 2011/12                    | 2012/13 | 2013/14 | 2014/15 | 2011/12                  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                                   | 2012/13 | 2013/14 | 2014/15 | 2011/12                  | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12  | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation | 1                                 | 1                          | 0       | 0       | 0       | 0                        | 0       | 0       | 1       | 0   | 1       | 1       | 2       | 3  | 2       | 1       | 4       | 4                                      | 3       | 3       | 86      | 86  | 83      | 79      | 155     | 153                                       | 151     | 147     | 261     | 277                      | 277     | 281     | 147     | 160   | 183     | 179     | 3       | 4   | 6       | 4       | 0       | 1  | 1       | 1       |         |
| Hunter Water Corporation | 3                                 | 3                          | 3       | 3       | 0       | 0                        | 0       | 0       | 2       | 2   | 1       | 1       | 2       | 2  | 2       | 2       | 8       | 7                                      | 6       | 6       | 71      | 79  | 71      | 70      | 122     | 142                                       | 128     | 136     | 156     | 154                      | 148     | 148     | 206     | 236   | 304     | 267     | 2       | 5   | 8       | 7       | 0       | 3  | 1       | 2       |         |
| Water NSW                |                                   |                            |         |         |         |                          |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |                          |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |
| 1                        | Gosford City Council              | 14                         | 25      | 15      | 12      |                          |         |         |         | 3   | 2       | 2       | 2       |  |         |         |         |  |         |         |         |   |         |         | 196     | 199                                       | 311     | 382     | 247     | 224                      | 209     | 306     | 153     | 171   | 187     | 126     | 0       | 0   | 0       | 0       | 16      | 14   | 12      | 6       |         |
| 2                        | Wyong Shire Council               | 8                          | 18      | 5       | 10      | 4                        | 5       | 6       | 6       | 12  | 10      | 12      | 12      |  |         |         | 24      | 33                                     | 23      | 29      | 49      | 32  | 33      | 34      | 180     | 204                                       | 200     | 133     | 138     | 143                      | 152     | 158     | 64      | 86  | 70      | 57      | 0       | 0   | 0       | 0       | 0       | 0  | 2       | 2       |         |
| 3                        | Shoalhaven City Council           | 1                          | 0       | 0       | 1       | 0                        | 0       | 0       | 1       | 1   | 0       | 1       | 0       | 0  | 0       | 0       | 1       | 1                                      | 1       | 2       | 100     | 100   | 96      | 96      | 177     | 194                                       | 220     | 135     | 91      | 92                       | 90      | 60      | 36      | 82  | 65      | 78      | 1       | 1   | 1       | 1       | 3       | 0  | 1       | 2       |         |
| 4                        | Rous Water                        |                            |         |         |         |                          |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         | 180     | 195                                       | 237     |         |         |                          |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |
| 5                        | MidCoast Water                    | 4                          | 3       | 3       | 3       | 1                        | 2       | 2       | 4       | 1   | 2       | 2       | 3       | 1  | 1       | 1       | 6       | 7                                      | 7       | 11      |         |   |         |         |         |   |         |         |         |                          |         |         | 2       | 2   | 6       | 0       | 0       | 1   | 0       | 4       | 1       | 3  | 2       |         |         |
| 6                        | Tweed Shire Council               | 5                          | 4       | 5       | 6       | 21                       | 24      | 28      | 17      | 6   | 6       | 7       | 6       | 0  | 0       | 1       | 31      | 33                                     | 40      | 29      | 51      | 56  | 48      |         | 160     | 149                                       | 134     | 228     | 182     | 130                      | 95      | 9       | 27      | 50  | 19      | 0       | 0       | 0   | 0       | 3       | 3       | 7  | 12      |         |         |
| 7                        | Port Macquarie Hastings Council   | 3                          | 9       | 7       | 6       | 14                       | 17      | 14      | 20      | 5   | 8       | 10      | 6       | 0  | 0       | 0       | 24      | 33                                     | 31      | 32      | 72      | 77  | 75      | 84      | 205     | 163                                       | 174     | 210     | 60      | 60                       | 60      | 60      | 6       | 11  | 10      | 14      | 0       | 1   | 1       | 0       | 0       | 0  | 0       | 1       |         |
| 8                        | Riverina Water                    | 3                          | 4       | 3       | 3       | 2                        | 2       | 3       | 2       |   |         |         |         | 4  | 3       | 4       | 8       | 9                                      | 10      | 7       |         |   |         |         | 281     | 308                                       | 173     | 185     |         |                          |         |         | 53      | 55  | 63      | 57      | 1       | 1   | 1       | 7       | 1       | 0  | 0       | 0       |         |
| 10                       | Coffs Harbour City Council        | 1                          | 0       | 0       | 0       | 53                       | 0       | 0       | 0       | 22  | 0       | 0       | 0       | 0  | 0       | 0       | 80      | 1                                      | 0       | 1       | 99      | 99  | 99      | 99      |         |   |         |         | 94      | 91                       | 99      | 95      | 73      | 35  | 9       | 11      | 5       | 5   | 6       | 2       | 0       | 0  | 0       | 0       |         |
| 11                       | Albury City Council               | 1                          | 4       | 3       | 3       | 5                        | 2       | 1       | 1       | 33  | 1       | 1       | 2       | 0  | 0       | 0       | 6       | 5                                      | 6       |         |         |   |         |         | 104     | 124                                       | 137     | 87      | 87      | 84                       | 94      |         |         |   |         | 0       | 0       | 0   | 1       | 21      | 4       | 27   | 23      |         |         |
| 12                       | Fish River Water                  |                            |         |         |         |                          |         |         |         |   |         |         |         |  |         |         |         |  |         | 98      | 100     | 100   | 100     |         | 1,640   | 600                                       | 600     |         |         |                          |         |         |         |   |         |         |         |   |         |         |         |  |         |         |         |
| 13                       | Tamworth Regional Council         |                            | 1       | 0       | 0       | 55                       | 47      | 56      | 43      | 22  | 22      | 21      | 16      | 0  | 0       | 0       | 82      | 67                                     | 78      | 59      |         |   |         |         |         |   |         |         |         |                          |         |         |         |   | 0       |         | 0       | 0   | 0       | 0       | 0       | 0  | 0       |         |         |
| 14                       | Clarence Valley Council           | 7                          | 8       | 23      | 14      | 27                       | 28      | 57      | 68      | 24  | 23      | 19      | 26      | 1  | 1       | 2       | 76      | 53                                     | 101     | 109     |         |   |         |         |         |   |         |         |         |                          |         |         |         | 0   | 0       | 0       | 0       | 3   | 6       | 6       | 5       |  |         |         |         |
| 15                       | Eurobodalla Shire Council         | 0                          | 0       | 1       | 1       | 0                        | 0       | 0       | 0       | 1   | 1       | 2       | 0       | 0  | 0       | 0       | 1       | 3                                      | 1       |         | 84      |   | 100     |         | 240     | 190                                       | 220     |         |         |                          |         |         | 57      | 93  | 120     | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 25      | 6       |         |
| 16                       | Wingecarribee Shire Council       | 10                         | 13      | 12      | 8       | 66                       | 75      | 72      | 55      | 24  | 21      | 20      | 11      | 1  | 0       | 0       | 120     | 105                                    | 103     | 74      | 66      | 79  | 53      |         | 91      | 108                                       | 122     |         | 120     | 120                      | 120     | 40      | 53      | 73  | 14      | 6       | 1       | 1   | 0       | 4       | 4       | 6  | 7       |         |         |
| 17                       | Queanbeyan City Council           |                            | 0       | 0       | 0       | 27                       | 31      | 23      | 19      | 18  | 10      | 11      | 12      | 4  | 4       | 2       | 49      | 45                                     | 37      | 33      |         |   |         |         | 180     | 180                                       | 180     | 180     | 120     | 120                      | 120     | 120     | 5       | 0   | 0       | 1       | 0       | 0   | 0       | 0       | 9       | 7  | 0       | 0       |         |
| 18                       | Dubbo City Council                | 0                          | 1       | 0       | 1       | 2                        | 4       | 3       | 3       | 9   | 11      | 11      | 12      | 0  | 0       | 0       | 15      | 15                                     | 15      |         | 90      | 89  | 89      | 87      | 168     | 152                                       | 75      | 131     | 96      | 99                       | 109     | 88      | 11      | 27  | 58      | 20      | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       |         |
| 19                       | Orange City Council               | 2                          | 2       | 1       | 1       | 56                       | 59      | 53      | 62      | 48  | 26      | 30      | 41      |  |         |         | 85      | 92                                     | 104     |         |         |   |         |         | 240     | 238                                       | 255     |         | 100     | 41                       | 52      |         | 66      | 73  | 51      | 0       | 0       | 0   | 1       | 0       | 0       | 0  | 0       |         |         |
| 21                       | Bathurst Regional Council         | 29                         | 38      | 35      | 34      | 50                       | 45      | 24      | 28      | 20  | 18      | 24      | 29      | 0  | 0       | 0       | 100     | 100                                    | 82      | 91      |         |   |         |         |         |   |         |         |         |                          |         | 2       | 1       | 2   | 2       | 0       | 0       | 0   | 0       | 0       | 0       | 0  | 0       | 0       |         |
| 22                       | Lismore City Council              | 1                          | 0       | 0       | 0       | 4                        | 0       | 1       | 2       | 22  | 3       | 16      | 2       | 1  | 1       | 2       | 28      | 4                                      | 19      | 4       | 80      | 80  | 80      |         | 288     | 120                                       | 140     |         | 112     | 69                       | 118     | 39      | 123     | 32  | 49      | 0       | 0       | 0   | 0       | 1       | 1       | 1  | 4       |         |         |
| 23                       | Bega Valley Shire Council         | 5                          | 9       | 13      | 13      | 16                       | 5       | 1       | 2       | 9   | 2       | 2       | 1       | 1  | 1       | 0       | 16      | 17                                     | 16      |         | 65      | 72  | 79      | 87      |         |   |         |         |         |                          |         | 3       | 1       | 3   | 0       | 0       | 0       | 0   | 1       | 5       | 2       | 4  |         |         |         |
| 24                       | Ballina Shire Council             | 0                          | 0       | 4       | 0       | 0                        | 0       | 4       | 0       | 3   | 1       | 4       | 3       | 0  |         | 0       | 3       | 1                                      | 12      | 3       |         |   |         |         |         |   |         |         |         |                          |         |         |         | 0   | 0       | 0       | 0       | 0   | 0       | 0       | 0       | 1  | 2       |         |         |
| 25                       | Kempsey Shire Council             | 0                          | 0       | 1       | 0       | 0                        | 0       | 0       | 0       | 1   | 2       | 2       | 1       | 0  | 0       | 0       | 1       | 2                                      | 3       | 2       | 49      | 48  | 45      |         | 132     | 165                                       | 127     | 215     | 191     | 170                      | 119     | 99      | 35      | 68  | 72      | 124     | 1       | 2   | 2       | 1       | 0       | 0  | 0       | 0       |         |
| 26                       | Essential Energy                  | 0                          | 8       | 0       | 0       | 0                        | 1       | 0       | 0       | 0   | 1       | 1       | 0       | 0  | 0       | 0       | 1       | 10                                     | 1       | 1       | 78      | 76  | 78      | 78      |         |   |         |         |         |                          |         |         |         |   | 73      | 28      | 27      | 31  | 0       | 0       | 0       | 0  |         |         |         |
| 27                       | Byron Shire Council               | 0                          | 0       | 1       | 2       | 0                        | 0       | 0       | 0       | 1   | 2       | 4       | 1       | 30   | 2       | 2       | 32      | 5                                      | 7       | 5       |         |   |         |         |         |   |         |         |         |                          |         |         |         |   | 1       | 2       | 1       | 3   | 0       | 0       | 0       | 0  |         |         |         |
| 28A                      | Goldenfields Water (Reticulation) | 7                          | 9       | 7       | 5       | 58                       | 39      | 1       | 0       |   |         |         |         | 0  |         | 0       | 49      | 8                                      | 5       |         |         |   |         |         | 235     | 192                                       | 205     |         |         |                          |         |         | 77      | 96  | 2       |         | 1       | 1   | 0       |         | 0       | 0  |         |         |         |
| 28B                      | Goldenfields Water (Bulk Water Su |                            |         |         |         |                          |         |         |         |   |         |         |         |  |         |         |         |  |         |         |         |   |         |         |         |   |         |         |         |                          |         |         |         |   |         |         |         |   |         |         |         | </   |         |         |         |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | HEALTH                   |           |           |           |  |         |         |         |                                       |          |          |          |   |         |         |         |
|---|-----------------------------------|--------------------------|-----------|-----------|-----------|--|---------|---------|---------|---------------------------------------|----------|----------|----------|---|---------|---------|---------|
|   |                                   | WS                       |           |           |           |  |         |         |         |                                       |          |          |          |   |         |         |         |
|   |                                   | Water quality guidelines |           |           |           | % population with microbiological compliance |         |         |         | No. of zones with chemical compliance |          |          |          | Risk based drinking water management plan externally assessed |         |         |         |
|   |                                   | H1                       |           |           |           | H3   |         |         |         | H4                                    |          |          |          | H5  |         |         |         |
|   |                                   | (<br>(%)                 |           |           |           | (YES/NO)                                     |         |         |         | (YES/NO)                              |          |          |          | (YES/NO)  |         |         |         |
|   |                                   | 2011/12                  | 2012/13   | 2013/14   | 2014/15   | 2011/12                                      | 2012/13 | 2013/14 | 2014/15 | 2011/12                               | 2012/13  | 2013/14  | 2014/15  | 2011/12   | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 12 of 13                              | 12 of 13 | 13 of 13 | 13/13    | Yes   | Yes     | Yes     | Yes     |
| Hunter Water Corporation                |                                   | ADWG 2011                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 5 of 5                                | 5 of 5   | 5 of 5   | 5 of 5   | No  | No      | No      | No      |
| Water NSW                               |                                   | ADWG 2011                | ADWG 2011 | ADWG 2011 | ADWG 2011 |  |         |         |         |                                       |          |          |          |   |         |         |         |
| 1                                       | Gosford City Council              | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 2 of 2                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 2                                       | Wyong Shire Council               | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 3                                       | Shoalhaven City Council           | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 4 of 4                                | 4 of 4   | 4 of 4   | 4 of 4   | No  | No      | No      | No      |
| 4                                       | Rous Water                        | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 2 of 2                                | 3 of 3   | 3 of 3   | 3 of 3   | No  | No      | No      | No      |
| 5                                       | MidCoast Water                    | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 5 of 5                                | 4 of 5   | 4 of 5   | 5 of 5   | Yes   | Yes     | Yes     | Yes     |
| 6                                       | Tweed Shire Council               | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 3 of 3                                | 3 of 3   | 3 of 3   | 3 of 3   | No  | No      | No      | No      |
| 7                                       | Port Macquarie Hastings Council   | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 5 of 5                                | 5 of 5   | 5 of 5   | 5 of 5   | No  | No      | No      | No      |
| 8                                       | Riverina Water                    | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 14 of 14                              | 14 of 14 | 14 of 14 | 14 of 14 | Yes   | Yes     | Yes     | Yes     |
| 10                                      | Coffs Harbour City Council        | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 3 of 3                                | 3 of 3   | 3 of 3   | 3 of 3   | No  | No      | No      | No      |
| 11                                      | Albury City Council               | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 12                                      | Fish River Water                  | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 13                                      | Tamworth Regional Council         | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 99      | 100     | 100     | 6 of 7                                | 7 of 7   | 7 of 7   | 7 of 7   | No  | No      | No      | No      |
| 14                                      | Clarence Valley Council           | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 99   | 73      | 100     | 100     | 5 of 5                                | 6 of 6   | 6 of 6   | 5 of 5   | No  | No      | No      | No      |
| 15                                      | Eurobodalla Shire Council         | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 16                                      | Wingecarribee Shire Council       | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 3 of 3                                | 3 of 3   | 3 of 3   | 2 of 2   | No  | No      | No      | No      |
| 17                                      | Queanbeyan City Council           | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 18                                      | Dubbo City Council                | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 19                                      | Orange City Council               | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 2 of 2                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 21                                      | Bathurst Regional Council         | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 22                                      | Lismore City Council              | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 23                                      | Bega Valley Shire Council         | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 6 of 6                                | 8 of 8   | 8 of 8   | 8 of 8   | No  | No      | No      | No      |
| 24                                      | Ballina Shire Council             | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 3 of 3   | 3 of 3   | 3 of 3   | No  | No      | No      | No      |
| 25                                      | Kempsey Shire Council             | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 7 of 7                                | 7 of 7   | 7 of 7   | 7 of 7   | No  | No      | No      | No      |
| 26                                      | Essential Energy                  | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 2 of 2                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 27                                      | Byron Shire Council               | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 28A                                     | Goldenfields Water (Reticulation) | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 1 of 1                                | 1 of 1   | 1 of 1   | 1 of 1   | No  | No      | No      | No      |
| 28B                                     | Goldenfields Water (Bulk Water Su | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 3 of 3                                | 2 of 3   | 3 of 3   | 3 of 3   | No  | No      | No      | No      |
| 20                                      | Goulburn Mulwaree Council         | ADWG 2004                | ADWG 2011 | ADWG 2011 | ADWG 2011 | 100  | 100     | 100     | 100     | 2 of 2                                | 2 of 2   | 2 of 2   | 2 of 2   | No  | No      | No      | No      |
| 9                                       | Wagga Wagga Council               |                          |           |           |           |  |         |         |         |                                       |          |          |          |   |         |         |         |
| LWU Range Max                           |                                   |                          |           |           |           | 100  | 100     | 100     | 100     |                                       |          |          |          |   |         |         |         |
| LWU Range Min                           |                                   |                          |           |           |           | 99   | 73      | 100     | 100     |                                       |          |          |          |   |         |         |         |
| Median of NMU Indicators shown in Table |                                   |                          |           |           |           | 100  | 100     | 100     | 100     |                                       |          |          |          |   |         |         |         |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY |  | RESIDENTIAL CHARGES AND BILLS |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|---------------|--|-------------------------------|--|----------------------|--|--------------|--|-----------------------|--|--|--|-----------------------|--|--|--|-----------------------|--|--|--|
|               |  | WATER SUPPLY                  |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  | Tariff structure              |  | Free water allowance |  | Fixed charge |  | Usage charge 1st step |  |  |  | Usage charge 2nd step |  |  |  | Usage charge 3rd step |  |  |  |
|               |  | P1                            |  | P1.1                 |  | P1.2         |  | P1.3                  |  |  |  | P1.4                  |  |  |  | P1.5                  |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |
|               |  |                               |  |                      |  |              |  |                       |  |  |  |                       |  |  |  |                       |  |  |  |

APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | RESIDENTIAL CHARGES AND BILLS |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
|---|-----------------------------------|-------------------------------|---------|-------------------------------------|---------|------------------------------|---------|---------|---------|---|---------|---------|---------|--------------------------------|---------|---------|---------|
|   |                                   | WATER SUPPLY                  |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
|   |                                   | Special levies                |         | Income retained from special levies |         | Annual Bill based on 200kL/a |         |         |         | Average Annual Residential Water Supplied |         |         |         | Typical Residential Bill (TRB) |         |         |         |
|   |                                   | P1.12                         |         | P1.13                               |         | P2                           |         |         |         | P2.1                                      |         |         |         | P3                             |         |         |         |
|   |                                   | \$                            |         | (Yes/No)                            |         | (\$ per assessment)          |         |         |         | (kL)                                      |         |         |         | (\$ per assessment)            |         |         |         |
|   |                                   | 2013/14                       | 2014/15 | 2013/14                             | 2014/15 | 2011/12                      | 2012/13 | 2013/14 | 2014/15 | 2011/12                                   | 2012/13 | 2013/14 | 2014/15 | 2011/12                        | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                |                                   |                               |         | No                                  | No      | 604                          | 586     | 568     | 560     | 193                                       | 198     | 206     | 201     | 589                            | 582     | 581     | 563     |
| Hunter Water Corporation                |                                   | 0                             | 0       | No                                  | no      | 426                          | 454     | 451     | 456     | 163                                       | 176     | 181     | 168     | 351                            | 402     | 409     | 385     |
| Water NSW                               |                                   |                               |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
| 1                                       | Gosford City Council              | 0                             | 0       | No                                  | No      | 543                          | 563     | 570     | 596     | 145                                       | 157     | 161     | 160     | 426                            | 467     | 483     | 507     |
| 2                                       | Wyong Shire Council               | 0                             | 0       | No                                  | No      | 592                          | 633     | 614     | 618     | 151                                       | 155     | 157     | 150     | 489                            | 535     | 527     | 508     |
| 3                                       | Shoalhaven City Council           | 0                             | 0       | No                                  | No      | 404                          | 409     | 408     | 401     | 130                                       | 149     | 147     | 142     | 292                            | 326     | 322     | 309     |
| 4                                       | Rous Water                        |                               |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
| 5                                       | MidCoast Water                    | 0                             | 0       | No                                  | No      | 688                          | 704     | 706     | 745     | 131                                       | 143     | 150     | 142     | 514                            | 556     | 575     | 587     |
| 6                                       | Tweed Shire Council               | 0                             | 0       | No                                  | No      | 522                          | 562     | 598     | 638     | 163                                       | 177     | 184     | 178     | 449                            | 512     | 562     | 584     |
| 7                                       | Port Macquarie Hastings Council   | 0                             | 0       | No                                  | No      | 622                          | 645     | 666     | 693     | 144                                       | 157     | 157     | 151     | 495                            | 543     | 559     | 568     |
| 8                                       | Riverina Water                    | 0                             | 0       | No                                  | No      | 310                          | 355     | 388     | 426     | 256                                       | 347     | 324     | 311     | 367                            | 524     | 541     | 574     |
| 10                                      | Coffs Harbour City Council        | 0                             | 0       | No                                  | No      | 645                          | 659     | 660     | 669     | 156                                       | 161     | 169     | 167     | 533                            | 559     | 579     | 582     |
| 11                                      | Albury City Council               | 0                             | 0       | No                                  | No      | 261                          | 286     | 313     | 349     | 203                                       | 255     | 232     | 205     | 264                            | 369     | 355     | 354     |
| 12                                      | Fish River Water                  |                               |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
| 13                                      | Tamworth Regional Council         | 0                             | 0       | No                                  | No      | 507                          | 526     | 527     | 532     | 204                                       | 261     | 287     | 188     | 513                            | 611     | 649     | 515     |
| 14                                      | Clarence Valley Council           | 0                             | 0       | No                                  | No      | 445                          | 481     | 500     | 507     | 139                                       | 148     | 161     | 147     | 345                            | 396     | 434     | 413     |
| 15                                      | Eurobodalla Shire Council         | 0                             | 0       | No                                  | No      | 799                          | 799     | 923     | 962     | 104                                       | 116     | 119     | 114     | 501                            | 536     | 642     | 668     |
| 16                                      | Wingecarribee Shire Council       | 0                             | 0       | No                                  | No      | 451                          | 485     | 482     | 502     | 157                                       | 186     | 200     | 178     | 381                            | 461     | 482     | 463     |
| 17                                      | Queanbeyan City Council           | 0                             | 0       | No                                  | No      | 790                          | 854     | 910     | 980     | 185                                       | 175     | 178     | 173     | 740                            | 767     | 829     | 871     |
| 18                                      | Dubbo City Council                | 0                             | 0       | No                                  | No      | 531                          | 539     | 586     | 612     | 249                                       | 368     | 350     | 327     | 613                            | 827     | 850     | 848     |
| 19                                      | Orange City Council               | 0                             | 0       | No                                  | No      | 561                          | 566     | 579     | 626     | 160                                       | 180     | 174     | 170     | 488                            | 529     | 530     | 564     |
| 21                                      | Bathurst Regional Council         | 0                             | 0       | No                                  | No      | 421                          | 435     | 466     | 481     | 180                                       | 259     | 227     | 223     | 392                            | 536     | 512     | 522     |
| 22                                      | Lismore City Council              | 0                             | 0       | No                                  | No      | 675                          | 693     | 741     | 802     | 143                                       | 145     | 155     | 155     | 530                            | 550     | 616     | 666     |
| 23                                      | Bega Valley Shire Council         | 0                             | 0       | No                                  | No      | 678                          | 687     | 691     | 698     | 130                                       | 139     | 134     | 137     | 509                            | 536     | 529     | 541     |
| 24                                      | Ballina Shire Council             | 0                             | 0       | No                                  | No      | 524                          | 542     | 570     | 593     | 166                                       | 177     | 194     | 181     | 463                            | 501     | 558     | 555     |
| 25                                      | Kempsey Shire Council             | 0                             | 0       | No                                  | No      | 608                          | 631     | 665     | 673     | 143                                       | 156     | 157     | 156     | 506                            | 544     | 577     | 580     |
| 26                                      | Essential Energy                  | 0                             | 0       | No                                  | No      | 575                          | 614     | 598     | 657     | 237                                       | 281     | 281     | 257     | 633                            | 754     | 735     | 755     |
| 27                                      | Byron Shire Council               | 0                             | 0       | No                                  | No      | 576                          | 590     | 602     | 619     | 168                                       | 176     | 181     | 180     | 507                            | 537     | 559     | 574     |
| 28A                                     | Goldenfields Water (Reticulation) | 0                             | 0       | No                                  | No      | 552                          | 566     | 579     | 598     | 199                                       | 261     | 284     | 272     | 549                            | 689     | 751     | 750     |
| 28B                                     | Goldenfields Water (Bulk Water Su |                               |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
| 20                                      | Goulburn Mulwaree Council         | 71                            | 40      | No                                  | No      | 710                          | 732     | 787     | 795     | 138                                       | 150     | 165     | 139     | 598                            | 626     | 690     | 624     |
| 9                                       | Wagga Wagga Council               |                               |         |                                     |         |                              |         |         |         |   |         |         |         |                                |         |         |         |
| LWU Range Max                           |                                   |                               |         |                                     |         | 799                          | 854     | 923     | 980     | 256                                       | 368     | 350     | 327     | 740                            | 827     | 850     | 871     |
| LWU Range Min                           |                                   |                               |         |                                     |         | 261                          | 286     | 313     | 349     | 104                                       | 116     | 119     | 114     | 264                            | 326     | 322     | 309     |
| Median of NMU Indicators shown in Table |                                   |                               |         |                                     |         | 561                          | 566     | 598     | 619     | 157                                       | 175     | 174     | 170     | 501                            | 536     | 559     | 574     |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | RESIDENTIAL CHARGES AND BILLS |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
|---|-----------------------------------|-------------------------------|--|----------------------|--|----------------------|--|----------------------|--|--------------|--|-------------|------|----------------|--|---------|----------|--|--|---------|--|---------|--|---------|--|-------------|--|----|--|---------|--|---|--|----|--|----|--|----|--|----|--|
|   |                                   | SEWERAGE                      |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
|   |                                   | Tariff Structure              |  |                      |  | Fixed charge min     |  |                      |  | Usage charge |  |             |      | Special Levies |  |         |          | Income from Special Levies Retained by Utility |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
|   |                                   |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
|   |                                   | P4                            |  |                      |  | P4.1                 |  |                      |  | P4.2         |  |             |      | P4.3           |  |         |          | P4.4   |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| (Charge Type)                           |                                   |                               |  | (\$)                 |  |                      |  | (\$/kL)              |  |              |  | Description | (\$) |                |  |         | (Yes/No) |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 2011/12                                 |                                   | 2012/13                       |  | 2013/14              |  | 2014/15              |  | 2011/12              |  | 2012/13      |  | 2013/14     |      | 2014/15        |  | 2011/12 |          | 2012/13  |  | 2013/14 |  | 2014/15 |  | 2013/14 |  | 2014/15     |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| Sydney Water Corporation                |                                   | n/a                           |  | N/A                  |  | N/A                  |  | NA                   |  | 577          |  | 580         |      | 580            |  | 592     |          |  |  |         |  |         |  |         |  | No          |  | No |  |         |  |   |  |    |  |    |  |    |  |    |  |
| Hunter Water Corporation                |                                   | 0                             |  | Service charge only  |  | Service charge only  |  | Service charge only  |  | 557          |  | 580         |      | 579            |  | 586     |          | 0.0  |  | 0.0     |  | 0.0     |  | 0.0     |  | 37 38 37 38 |  |    |  | Yes Yes |  |   |  |    |  |    |  |    |  |    |  |
| Water NSW                               |                                   |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 1                                       | Gosford City Council              | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 543          |  | 559         |      | 586            |  | 612     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 2                                       | Wyong Shire Council               | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 481          |  | 484         |      | 525            |  | 471     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 3                                       | Shoalhaven City Council           | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 690          |  | 709         |      | 726            |  | 750     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 4                                       | Rous Water                        |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 5                                       | MidCoast Water                    | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 945          |  | 961         |      | 936            |  | 948     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 6                                       | Tweed Shire Council               | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 651          |  | 679         |      | 703            |  | 732     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 7                                       | Port Macquarie Hastings Council   | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 690          |  | 704         |      | 716            |  | 736     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 8                                       | Riverina Water                    |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 10                                      | Coffs Harbour City Council        | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 770          |  | 794         |      | 796            |  | 806     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 11                                      | Albury City Council               | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 477          |  | 511         |      | 571            |  | 639     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 12                                      | Fish River Water                  |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 13                                      | Tamworth Regional Council         | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 765          |  | 748         |      | 751            |  | 758     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 14                                      | Clarence Valley Council           | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 809          |  | 866         |      | 922            |  | 988     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 15                                      | Eurobodalla Shire Council         | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 832          |  | 853         |      | 858            |  | 865     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 16                                      | Wingecarribee Shire Council       | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 657          |  | 692         |      | 723            |  | 739     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 17                                      | Queanbeyan City Council           | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 376          |  | 381         |      | 421            |  | 470     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 18                                      | Dubbo City Council                | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 614          |  | 643         |      | 663            |  | 690     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 19                                      | Orange City Council               | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 361          |  | 365         |      | 391            |  | 423     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 21                                      | Bathurst Regional Council         | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 448          |  | 453         |      | 464            |  | 479     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 22                                      | Lismore City Council              | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 713          |  | 733         |      | 751            |  | 772     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 23                                      | Bega Valley Shire Council         | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 1056         |  | 1092        |      | 1,099          |  | 1,109   |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 24                                      | Ballina Shire Council             | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 674          |  | 704         |      | 747            |  | 807     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 25                                      | Kempsey Shire Council             | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 709          |  | 711         |      | 749            |  | 791     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 26                                      | Essential Energy                  | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 497          |  | 519         |      | 505            |  | 511     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 27                                      | Byron Shire Council               | Fixed + Usage Charge          |  | Fixed + Usage Charge |  | Fixed + Usage Charge |  | Fixed + Usage Charge |  | 727          |  | 768         |      | 771            |  | 780     |          | 2  |  | 2       |  | 2       |  | 2       |  |             |  |    |  | 0       |  | 0 |  | 0  |  | 0  |  | No |  | No |  |
| 28A                                     | Goldenfields Water (Reticulation) |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 28B                                     | Goldenfields Water (Bulk Water Su |                               |  |                      |  |                      |  |                      |  |              |  |             |      |                |  |         |          |  |  |         |  |         |  |         |  |             |  |    |  |         |  |   |  |    |  |    |  |    |  |    |  |
| 20                                      | Goulburn Mulwaree Council         | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 697          |  | 705         |      | 711            |  | 724     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| 9                                       | Wagga Wagga Council               | Fixed Charge                  |  | Fixed Charge         |  | Fixed Charge         |  | Fixed Charge         |  | 464          |  | 454         |      | 441            |  | 434     |          |  |  |         |  |         |  |         |  | 0           |  | 0  |  | 0       |  | 0 |  | No |  | No |  |    |  |    |  |
| LWU Range Max                           |                                   |                               |  |                      |  |                      |  |                      |  | 1,056        |  | 1,092       |      | 1,099          |  | 1,109   |          | 2  |  | 2       |  | 2       |  | 2       |  |             |  |    |  | 0       |  | 0 |  | 0  |  | 0  |  |    |  |    |  |
| LWU Range Min                           |                                   |                               |  |                      |  |                      |  |                      |  | 361          |  | 365         |      | 391            |  | 423     |          | 2  |  | 2       |  | 2       |  | 2       |  |             |  |    |  | 0       |  | 0 |  | 0  |  | 0  |  |    |  |    |  |
| Median of NMU Indicators shown in Table |                                   |                               |  |                      |  |                      |  |                      |  | 682          |  | 704         |      | 720            |  | 738     |          | 2  |  | 2       |  | 2       |  | 2       |  |             |  |    |  | 0       |  | 0 |  | 0  |  | 0  |  |    |  |    |  |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                              | RESIDENTIAL CHARGES AND BILLS |         |         |         |                                |         |         |         |  |         |         |         |  |         |         |         |
|--|-------------------------------|---------|---------|---------|--------------------------------|---------|---------|---------|--|---------|---------|---------|--|---------|---------|---------|
|  | SEWERAGE                      |         |         |         |                                |         |         |         | WS & SGE                                 |         |         |         |  |         |         |         |
|  | Annual Bill based on 200kL/a  |         |         |         | Typical Residential Bill (TRB) |         |         |         | Annual Bill based on 200kL/a<br>WS + Sge |         |         |         | Typical Residential Bill (TRB)<br>WS + Sge |         |         |         |
|  | P5                            |         |         |         | P6                             |         |         |         | P7                                       |         |         |         | P8   |         |         |         |
|  | (\$ per assessment)           |         |         |         | (\$ per assessment)            |         |         |         | (\$ per assessment)                      |         |         |         | (\$ per assessment)                        |         |         |         |
|  | 2011/12                       | 2012/13 | 2013/14 | 2014/15 | 2011/12                        | 2012/13 | 2013/14 | 2014/15 | 2011/12                                  | 2012/13 | 2013/14 | 2014/15 | 2011/12                                    | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation                   | 577                           | 580     | 580     | 592     | 577                            | 580     | 580     | 592     | 1,181                                    | 1,166   | 1,149   | 1,153   | 1,165                                      | 1,162   | 1,162   | 1,156   |
| Hunter Water Corporation                   | 594                           | 618     | 616     | 623     | 594                            | 618     | 616     | 623     | 1,021                                    | 1,072   | 1,067   | 1,079   | 945  | 1,020   | 1,025   | 1,008   |
| Water NSW                                  |                               |         |         |         |                                |         |         |         |  |         |         |         |  |         |         |         |
| 1 Gosford City Council                     | 543                           | 559     | 586     | 612     | 543                            | 559     | 586     | 612     | 1,086                                    | 1,122   | 1,155   | 1,208   | 970  | 1,026   | 1,069   | 1,119   |
| 2 Wyong Shire Council                      | 481                           | 484     | 466     | 471     | 481                            | 484     | 466     | 471     | 1073                                     | 1118    | 1,080   | 1,089   | 970  | 1019    | 993     | 979     |
| 3 Shoalhaven City Council                  | 690                           | 709     | 726     | 750     | 690                            | 709     | 726     | 750     | 1094                                     | 1117    | 1,134   | 1,151   | 982  | 1035    | 1,049   | 1,059   |
| 4 Rous Water                               |                               |         |         |         |                                |         |         |         |  |         |         |         |  |         |         |         |
| 5 MidCoast Water                           | 945                           | 961     | 936     | 948     | 945                            | 961     | 936     | 948     | 1633                                     | 1666    | 1,641   | 1,693   | 1459                                       | 1517    | 1,510   | 1,535   |
| 6 Tweed Shire Council                      | 651                           | 679     | 703     | 732     | 651                            | 679     | 703     | 732     | 1173                                     | 1241    | 1,301   | 1,370   | 1100                                       | 1191    | 1,265   | 1,316   |
| 7 Port Macquarie Hastings Council          | 690                           | 704     | 716     | 736     | 690                            | 704     | 716     | 736     | 1312                                     | 1349    | 1,382   | 1,429   | 1184                                       | 1248    | 1,275   | 1,304   |
| 8 Riverina Water                           |                               |         |         |         |                                |         |         |         | 310                                      | 355     | 388     | 426     | 367  | 524     | 541     | 574     |
| 10 Coffs Harbour City Council              | 770                           | 794     | 796     | 806     | 770                            | 794     | 796     | 806     | 1414                                     | 1454    | 1,456   | 1,475   | 1303                                       | 1353    | 1,375   | 1,388   |
| 11 Albury City Council                     | 477                           | 511     | 571     | 639     | 477                            | 511     | 571     | 639     | 738                                      | 797     | 884     | 988     | 740  | 880     | 925     | 993     |
| 12 Fish River Water                        |                               |         |         |         |                                |         |         |         |  |         |         |         |  |         |         |         |
| 13 Tamworth Regional Council               | 765                           | 748     | 751     | 758     | 765                            | 748     | 751     | 758     | 1272                                     | 1274    | 1,277   | 1,290   | 1278                                       | 1360    | 1,399   | 1,273   |
| 14 Clarence Valley Council                 | 809                           | 866     | 922     | 988     | 809                            | 866     | 922     | 988     | 1254                                     | 1347    | 1,423   | 1,495   | 1155                                       | 1262    | 1,357   | 1,401   |
| 15 Eurobodalla Shire Council               | 832                           | 853     | 858     | 865     | 832                            | 853     | 858     | 865     | 1630                                     | 1652    | 1,782   | 1,827   | 1333                                       | 1389    | 1,500   | 1,533   |
| 16 Wingecarribee Shire Council             | 657                           | 692     | 723     | 739     | 657                            | 692     | 723     | 739     | 1109                                     | 1177    | 1,205   | 1,241   | 1038                                       | 1153    | 1,205   | 1,202   |
| 17 Queanbeyan City Council                 | 376                           | 381     | 421     | 470     | 376                            | 381     | 421     | 470     | 1166                                     | 1235    | 1,331   | 1,450   | 1116                                       | 1148    | 1,250   | 1,341   |
| 18 Dubbo City Council                      | 615                           | 643     | 663     | 690     | 614                            | 643     | 663     | 690     | 1146                                     | 1182    | 1,249   | 1,302   | 1228                                       | 1469    | 1,513   | 1,538   |
| 19 Orange City Council                     | 360                           | 365     | 391     | 423     | 360                            | 365     | 391     | 423     | 921                                      | 931     | 969     | 1,049   | 849  | 893     | 920     | 987     |
| 21 Bathurst Regional Council               | 448                           | 452     | 464     | 479     | 448                            | 452     | 464     | 479     | 869                                      | 887     | 930     | 960     | 840  | 989     | 975     | 1,001   |
| 22 Lismore City Council                    | 713                           | 733     | 751     | 772     | 713                            | 733     | 751     | 772     | 1388                                     | 1425    | 1,492   | 1,574   | 1243                                       | 1282    | 1,367   | 1,438   |
| 23 Bega Valley Shire Council               | 1056                          | 1092    | 1,099   | 1,109   | 1056                           | 1092    | 1,099   | 1,109   | 1734                                     | 1779    | 1,790   | 1,807   | 1565                                       | 1628    | 1,628   | 1,650   |
| 24 Ballina Shire Council                   | 673                           | 704     | 746     | 807     | 673                            | 704     | 746     | 807     | 1197                                     | 1247    | 1,316   | 1,400   | 1137                                       | 1205    | 1,305   | 1,362   |
| 25 Kempsey Shire Council                   | 709                           | 711     | 749     | 791     | 709                            | 711     | 749     | 791     | 1317                                     | 1342    | 1,414   | 1,464   | 1215                                       | 1255    | 1,325   | 1,371   |
| 26 Essential Energy                        | 497                           | 519     | 505     | 511     | 497                            | 519     | 505     | 511     | 1072                                     | 1133    | 1,103   | 1,168   | 1130                                       | 1274    | 1,241   | 1,266   |
| 27 Byron Shire Council                     | 1052                          | 1113    | 1,121   | 1,126   | 1000                           | 1059    | 1,078   | 1,093   | 1628                                     | 1703    | 1,723   | 1,745   | 1507                                       | 1596    | 1,637   | 1,667   |
| 28A Goldenfields Water (Reticulation)      |                               |         |         |         |                                |         |         |         | 552                                      | 566     | 579     | 598     | 549  | 689     | 751     | 750     |
| 28B Goldenfields Water (Bulk Water Supply) |                               |         |         |         |                                |         |         |         |  |         |         |         |  |         |         |         |
| 20 Goulburn Mulwaree Council               | 697                           | 705     | 711     | 724     | 697                            | 705     | 711     | 724     | 1407                                     | 1437    | 1498    | 1,519   | 1295                                       | 1331    | 1400    | 1,348   |
| 9 Wagga Wagga Council                      | 464                           | 454     | 441     | 434     | 464                            | 454     | 441     | 434     | 464                                      | 454     | 441     | 434     | 464  | 454     | 441     | 434     |
| LWU Range Max                              | 1,056                         | 1,113   | 1,121   | 1,126   | 1,056                          | 1,092   | 1,099   | 1,109   | 1,734                                    | 1,779   | 1,790   | 1,827   | 1,565                                      | 1,628   | 1,637   | 1,667   |
| LWU Range Min                              | 360                           | 365     | 391     | 423     | 360                            | 365     | 391     | 423     | 310                                      | 355     | 388     | 426     | 367  | 454     | 441     | 434     |
| Median of NMU Indicators shown in Table    | 682                           | 704     | 720     | 738     | 682                            | 704     | 720     | 738     | 1,170                                    | 1,238   | 1,289   | 1,336   | 1,134                                      | 1,227   | 1,270   | 1,310   |

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| WATER UTILITY            |                                 | FINANCIAL  |           |           |           |   |           |           |           |  |           |           |           |   |         |         |         |                             |         |         |         |                              |         |         |         |                    |         |         |         |                   |         |         |         |
|--------------------------|---------------------------------|--|-----------|-----------|-----------|---|-----------|-----------|-----------|--|-----------|-----------|-----------|---|---------|---------|---------|-----------------------------|---------|---------|---------|------------------------------|---------|---------|---------|--------------------|---------|---------|---------|-------------------|---------|---------|---------|
|                          |                                 | WS   |           |           |           | SGE   |           |           |           | WS & SGE   |           |           |           | WS  |         |         |         |                             |         |         |         | SGE                          |         |         |         | WS & SGE           |         |         |         |                   |         |         |         |
|                          |                                 | Total Revenue Water<br>(excludes gain/loss on disposal of assets,<br>grants for capital works & investment income) |           |           |           | Total Revenue Sewerage<br>(excludes gain/loss on disposal of assets, grants<br>for capital works & investment income) |           |           |           | Total Income WS + Sge<br>(includes gain/loss on disposal of assets)<br>(may not equal F1 + F2) |           |           |           | Residential Revenue from<br>Usage Charges |         |         |         | Revenue per property for WS |         |         |         | Revenue per property for Sge |         |         |         | Income for Utility |         |         |         | Revenue from CSOs |         |         |         |
|                          |                                 | F1   |           |           |           | F2  |           |           |           | F3   |           |           |           | F4  |         |         |         | F5                          |         |         |         | F6                           |         |         |         | F7                 |         |         |         | F8                |         |         |         |
|                          |                                 | (\$'000)   |           |           |           | (\$'000)  |           |           |           | (\$'000)   |           |           |           | (%)                                       |         |         |         | (\$/property)               |         |         |         | (\$/property)                |         |         |         | (\$/property)      |         |         |         | (%)               |         |         |         |
|                          |                                 | 2011/12  | 2012/13   | 2013/14   | 2014/15   | 2011/12   | 2012/13   | 2013/14   | 2014/15   | 2011/12  | 2012/13   | 2013/14   | 2014/15   | 2011/12                                   | 2012/13 | 2013/14 | 2014/15 | 2011/12                     | 2012/13 | 2013/14 | 2014/15 | 2011/12                      | 2012/13 | 2013/14 | 2014/15 | 2011/12            | 2012/13 | 2013/14 | 2014/15 | 2011/12           | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation |                                 | 1,270,000  | 1,290,000 | 1,300,000 | 1,320,000 | 1,230,000   | 1,270,000 | 1,270,000 | 1,320,000 | 2,790,000  | 2,580,000 | 2,610,000 | 2,680,000 | 78  | 78      | 79      | 80      | 702                         | 698     | 704     | 705     | 696                          | 711     | 708     | 721     | 1,542              | 1,400   | 1,410   | 1,427   | 6                 | 6       | 6       | 6       |
| Hunter Water Corporation |                                 | 120,755  | 140,333   | 146,949   | 140,316   | 158,733   | 164,759   | 160,650   | 172,061   | 279,020  | 305,091   | 307,600   | 312,376   | 66  | 95      | 96      | 95      | 524                         | 602     | 623     | 588     | 725                          | 744     | 716     | 756     | 1,211              | 1,310   | 1,304   | 1,308   | 5                 | 5       | 5       | 5       |
| Water NSW                |                                 | 219,262  | 207,235   | 208,729   | 205,080   |   |           |           |           | 222,666  | 210,759   | 212,788   | 206,271   |   |         |         |         |                             |         |         |         |                              |         |         |         |                    |         |         |         |                   |         |         |         |
| 1                        | Gosford City Council            | 36,628   | 45,162    | 45,173    | 45,594    | 39,940  | 43,488    | 45,005    | 49,729    | 75,965   | 89,601    | 91,355    | 95,673    | 77  | 76      | 76      | 73      | 520                         | 638     | 632     | 635     | 580                          | 630     | 645     | 710     | 1,076              | 1,267   | 1,278   | 1,332   | 1                 | 1       | 1       | 1       |
| 2                        | Wyong Shire Council             | 42,796   | 47,731    | 49,234    | 52,403    | 32,017  | 32,863    | 32,279    | 35,389    | 73,186   | 78,501    | 81,217    | 86,998    | 60  | 62      | 67      | 67      | 706                         | 787     | 801     | 825     | 537                          | 552     | 535     | 572     | 1,207              | 1,295   | 1,322   | 1,370   | 2                 | 2       | 2       | 2       |
| 3                        | Shoalhaven City Council         | 22,093   | 24,499    | 23,561    | 26,802    | 39,259  | 40,035    | 41,153    | 46,747    | 61,285   | 65,452    | 64,766    | 70,579    | 71  | 76      | 74      | 75      | 478                         | 526     | 501     | 568     | 963                          | 974     | 982     | 1,116   | 1,327              | 1,404   | 1,379   | 1,495   | 2                 | 2       | 2       | 2       |
| 4                        | Rous Water                      | 21,656   | 20,740    | 22,899    | 23,017    |   |           |           |           | 21,593   | 20,442    | 22,576    | 22,840    |   |         |         |         |                             |         |         |         |                              |         |         |         |                    |         |         |         | 0                 | 0       | 0       | 0       |
| 5                        | MidCoast Water                  | 26,409   | 31,965    | 31,155    | 31,135    | 37,882  | 41,056    | 39,183    | 39,758    | 104,402  | 69,010    | 64,602    | 68,537    | 72  | 75      | 75      | 72      | 688                         | 831     | 807     | 805     | 1,088                        | 1,176   | 1,119   | 1,133   | 2,722              | 1,793   | 1,675   | 1,771   | 1                 | 2       | 1       | 1       |
| 6                        | Tweed Shire Council             | 22,557   | 23,842    | 32,955    | 28,750    | 29,331  | 28,135    | 36,343    | 33,466    | 48,043   | 50,384    | 67,855    | 60,033    | 75  | 75      | 77      | 75      | 719                         | 756     | 1,035   | 892     | 946                          | 935     | 1,197   | 1,088   | 1,532              | 1,597   | 2,132   | 1,862   | 2                 | 2       | 1       | 1       |
| 7                        | Port Macquarie Hastings Council | 22,804   | 20,925    | 30,689    | 26,705    | 21,779  | 24,707    | 32,488    | 24,621    | 44,181   | 45,151    | 61,244    | 51,191    | 68  | 74      | 69      | 68      | 760                         | 703     | 1,020   | 878     | 809                          | 907     | 1,182   | 885     | 1,472              | 1,518   | 2,035   | 1,683   | 2                 | 2       | 1       | 1       |
| 8                        | Riverina Water                  | 18,588   | 26,093    | 27,721    | 30,463    |   |           |           |           | 18,564   | 26,219    | 27,688    | 30,429    | 72  | 77      | 76      | 75      | 635                         | 889     | 938     | 1,020   |                              |         |         |         | 634                | 893     | 937     | 1,019   | 1                 | 1       | 1       | 1       |
| 10                       | Coffs Harbour City Council      | 18,933   | 22,359    | 20,583    | 22,123    | 27,122  | 27,122    | 27,960    | 28,637    | 46,055   | 47,814    | 47,956    | 49,963    | 73  | 74      | 76      | 76      | 768                         | 903     | 827     | 883     | 1,165                        | 1,159   | 1,188   | 1,208   | 1,866              | 1,932   | 1,926   | 1,994   | 1                 | 1       | 1       | 1       |
| 11                       | Albury City Council             | 10,734   | 15,037    | 16,648    | 16,794    | 15,548  | 18,369    | 20,814    | 20,857    | 26,014   | 33,393    | 37,470    | 35,810    | 69  | 79      | 79      | 75      | 468                         | 646     | 706     | 653     | 730                          | 850     | 949     | 869     | 1,135              | 1,436   | 1,589   | 1,393   | 1                 | 1       | 1       | 1       |
| 12                       | Fish River Water                | 7,439  | 9,156     | 10,216    |           |   |           |           |           | 7,439  | 9,156     | 10,216    |           |   |         |         |         | 316                         |         |         |         |                              |         |         |         | 316                |         |         |         | 0                 | 0       |         |         |
| 13                       | Tamworth Regional Council       | 19,978   | 18,811    | 23,011    | 20,051    | 20,147  | 19,270    | 20,833    | 21,526    | 39,706   | 38,077    | 43,814    | 40,779    | 58  | 60      | 64      | 55      | 952                         | 886     | 1,074   | 924     | 1,066                        | 1,005   | 1,077   | 1,093   | 1,893              | 1,793   | 2,045   | 1,879   | 1                 | 1       | 1       | 1       |
| 14                       | Clarence Valley Council         | 13,155   | 13,512    | 14,652    | 14,902    | 15,053  | 15,297    | 16,218    | 18,035    | 28,016   | 29,415    | 31,437    | 32,509    | 65  | 67      | 67      | 66      | 592                         | 633     | 684     | 694     | 1,032                        | 1,045   | 1,108   | 1,226   | 1,260              | 1,377   | 1,469   | 1,515   | 2                 | 2       | 1       | 1       |
| 15                       | Eurobodalla Shire Council       | 13,116   | 13,185    | 15,796    | 16,997    | 18,690  | 18,532    | 19,117    | 19,300    | 31,032   | 29,071    | 34,443    | 34,828    | 66  | 68      | 64      | 58      | 672                         | 677     | 807     | 867     | 1,045                        | 1,035   | 1,061   | 1,066   | 1,590              | 1,494   | 1,760   | 1,777   | 1                 | 1       | 1       | 1       |
| 16                       | Wingecarribee Shire Council     | 10,813   | 12,763    | 13,683    | 13,242    | 13,454  | 13,782    | 15,141    | 16,755    | 24,254   | 26,504    | 28,809    | 28,959    | 65  | 68      | 69      | 68      | 582                         | 681     | 722     | 690     | 916                          | 938     | 970     | 1,065   | 1,304              | 1,415   | 1,519   | 1,512   | 1                 | 1       | 1       | 1       |
| 17                       | Queanbeyan City Council         | 13,853   | 15,642    | 19,232    | 19,105    | 6,735   | 7,181     | 12,819    | 11,702    | 20,588   | 22,823    | 32,051    | 30,807    | 62  | 63      | 64      | 61      | 864                         | 960     | 1,172   | 1,098   | 420                          | 441     | 769     | 676     | 1,284              | 1,400   | 1,953   | 1,771   | 1                 | 1       | 1       | 1       |
| 18                       | Dubbo City Council              | 13,316   | 17,158    | 18,078    | 20,554    | 11,829  | 13,496    | 14,463    | 17,236    | 22,973   | 30,359    | 30,604    | 37,622    | 71  | 78      | 75      | 74      | 791                         | 1,013   | 1,055   | 1,169   | 753                          | 852     | 903     | 1,050   | 1,365              | 1,792   | 1,785   | 2,139   | 1                 | 1       | 1       | 1       |
| 19                       | Orange City Council             | 13,657   | 16,152    | 15,841    | 17,582    | 10,141  | 10,755    | 11,893    | 14,039    | 23,772   | 26,963    | 27,914    | 31,729    | 61  | 64      | 71      | 70      | 814                         | 954     | 921     | 1,004   | 639                          | 664     | 722     | 848     | 1,416              | 1,593   | 1,624   | 1,811   | 1                 | 1       | 1       | 1       |
| 21                       | Bathurst Regional Council       | 10,523   | 13,138    | 15,065    | 15,235    | 8,773   | 10,004    | 10,967    | 12,345    | 19,297   | 22,978    | 26,032    | 27,412    | 71  | 83      | 83      | 82      | 696                         | 863     | 967     | 969     | 586                          | 661     | 710     | 778     | 1,276              | 1,509   | 1,672   | 1,744   | 1                 | 1       | 1       | 1       |
| 22                       | Lismore City Council            | 9,685  | 10,259    | 10,998    | 11,801    | 11,476  | 11,480    | 10,951    | 11,319    | 21,047   | 19,991    | 21,247    | 21,716    | 69  | 70      | 70      | 70      | 683                         | 720     | 769     | 824     | 910                          | 906     | 858     | 885     | 1,484              | 1,403   | 1,486   | 1,516   | 1                 | 1       | 1       | 1       |
| 23                       | Bega Valley Shire Council       | 11,295   | 9,274     | 10,471    | 9,990     | 15,582  | 15,432    | 16,747    | 16,631    | 26,873   | 24,670    | 27,200    | 26,650    | 66  | 60      | 63      | 65      | 789                         | 647     | 727     | 694     | 1,279                        | 1,271   | 1,375   | 1,363   | 1,876              | 1,721   | 1,891   | 1,851   | 1                 | 1       | 1       | 1       |
| 24                       | Ballina Shire Council           | 9,702  | 10,421    | 11,475    | 11,575    | 14,081  | 14,169    | 15,744    | 16,795    | 23,408   | 22,767    | 27,112    | 16,151    | 66  | 67      | 68      | 68      | 669                         | 746     | 810     | 806     | 1,055                        | 1,031   | 1,120   | 1,190   | 1,613              | 1,629   | 1,912   | 1,125   | 1                 | 1       | 1       | 2       |
| 25                       | Kempsey Shire Council           | 8,680  | 10,264    | 10,068    | 12,544    | 7,869   | 8,016     | 8,304     | 9,280     | 16,525   | 17,813    | 17,462    | 20,557    | 53  | 59      | 59      | 59      | 690                         | 814     | 807     | 1,004   | 846                          | 859     | 852     | 947     | 1,312              | 1,412   | 1,400   | 1,645   | 2                 | 2       | 2       | 1       |
| 26                       | Essential Energy                | 14,892   | 17,667    | 15,236    | 14,591    | 6,163   | 6,525     | 6,430     | 6,409     | 21,055   | 24,192    | 21,666    | 21,000    | 60  | 66      |         |         |                             |         |         |         |                              |         |         |         |                    |         |         |         |                   |         |         |         |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY            |                                   | FINANCIAL                                  |            |            |            |   |            |            |            |                                   |         |         |         |                               |         |         |         |  |         |         |         |                                 |         |         |         |                               |         |         |         |
|--------------------------|-----------------------------------|--|------------|------------|------------|---|------------|------------|------------|-----------------------------------|---------|---------|---------|-------------------------------|---------|---------|---------|--|---------|---------|---------|---------------------------------|---------|---------|---------|-------------------------------|---------|---------|---------|
|                          |                                   | WS   |            |            |            | SGE   |            |            |            | WS                                |         |         |         | SGE                           |         |         |         | WS + SGE                               |         |         |         | WS                              |         |         |         | SGE                           |         |         |         |
|                          |                                   | Written Down Replacement Cost of WS Assets |            |            |            | Written Down Replacement Cost of Sge Assets |            |            |            | Operating Cost OMA - Water Supply |         |         |         | Operating Cost OMA - Sewerage |         |         |         | Combined Operating Cost OMA - WS & Sge |         |         |         | Total Water Capital Expenditure |         |         |         | Total Sge Capital Expenditure |         |         |         |
|                          |                                   | F9   |            |            |            | F10   |            |            |            | F11                               |         |         |         | F12                           |         |         |         | F13                                    |         |         |         | F14                             |         |         |         | F15                           |         |         |         |
|                          |                                   | (\$'000)                                   |            |            |            | (\$'000)                                    |            |            |            | (\$/prop)                         |         |         |         | (\$/prop)                     |         |         |         | (\$/prop)                              |         |         |         | (\$'000)                        |         |         |         | (\$'000)                      |         |         |         |
|                          |                                   | 2011/12                                    | 2012/13    | 2013/14    | 2014/15    | 2011/12                                     | 2012/13    | 2013/14    | 2014/15    | 2011/12                           | 2012/13 | 2013/14 | 2014/15 | 2011/12                       | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 | 2011/12                         | 2012/13 | 2013/14 | 2014/15 | 2011/12                       | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation |                                   | 11,731,991                                 | 12,018,131 | 12,176,110 | 12,448,466 | 22,994,649                                  | 30,252,665 | 30,973,603 | 31,661,423 | 365                               | 408     | 408     | 386     | 293                           | 279     | 268     | 278     | 659                                    | 687     | 676     | 664     | 297,712                         | 258,598 | 199,021 | 150,110 | 473,184                       | 436,668 | 397,461 | 477,599 |
| Hunter Water Corporation |                                   | 1,930,105                                  | 2,260,902  | 2,332,222  | 2,415,117  | 3,195,059                                   | 3,224,788  | 4,519,324  | 4,473,873  | 240                               | 244     | 233     | 270     | 308                           | 374     | 346     | 353     | 548                                    | 618     | 579     | 623     | 37,027                          | 30,180  | 77,573  | 36,668  | 85,322                        | 61,490  | 33,183  | 40,729  |
| Water NSW                |                                   |  |            |            |            |   |            |            |            |                                   |         |         |         |                               |         |         |         |  |         |         |         | 21,331                          | 18,496  | 32,822  | 13,976  |                               |         |         |         |
| 1                        | Gosford City Council              | 518,620                                    | 535,766    | 550,751    | 550,676    | 1,400,948                                   | 1,454,998  | 1,504,642  | 1,537,152  | 368                               | 390     | 373     | 331     | 347                           | 451     | 411     | 379     | 715                                    | 841     | 784     | 710     | 13,921                          | 12,954  | 13,102  | 6,777   | 32,002                        | 34,758  | 28,130  | 29,284  |
| 2                        | Wyong Shire Council               | 554,368                                    | 835,780    | 852,534    | 955,677    | 649,311                                     | 691,681    | 703,801    | 712,134    | 341                               | 333     | 324     | 319     | 350                           | 361     | 360     | 336     | 690                                    | 695     | 684     | 655     | 84,250                          | 14,209  | 20,164  | 15,846  | 10,765                        | 12,623  | 6,643   | 11,511  |
| 3                        | Shoalhaven City Council           | 317,927                                    | 309,411    | 347,993    | 357,012    | 485,526                                     | 467,845    | 453,016    | 465,354    | 299                               | 294     | 279     | 275     | 482                           | 486     | 486     | 500     | 781                                    | 780     | 765     | 775     | 6,032                           | 4,456   | 10,810  | 10,275  | 22,032                        | 17,444  | 13,268  | 12,354  |
| 4                        | Rous Water                        | 305,103                                    | 309,522    | 316,410    | 325,694    |   |            |            |            |                                   |         |         |         |                               |         |         |         |  |         |         |         | 3,081                           | 2,613   | 5,631   | 12,120  |                               |         |         |         |
| 5                        | MidCoast Water                    | 434,466                                    | 460,780    | 457,488    | 436,300    | 436,498                                     | 448,971    | 466,861    | 453,068    | 517                               | 448     | 418     | 478     | 515                           | 515     | 499     | 544     | 1,032                                  | 963     | 917     | 1,021   | 47,500                          | 11,036  | 7,635   | 3,088   | 37,579                        | 11,267  | 3,841   | 3,701   |
| 6                        | Tweed Shire Council               | 425,985                                    | 474,016    | 491,889    | 494,987    | 514,835                                     | 585,248    | 599,624    | 603,979    | 420                               | 448     | 430     | 419     | 456                           | 481     | 514     | 524     | 877                                    | 928     | 945     | 943     | 6,633                           | 5,465   | 8,775   | 1,955   | 32,553                        | 8,416   | 4,528   | 5,042   |
| 7                        | Port Macquarie Hastings Council   | 448,512                                    | 447,416    | 452,627    | 347,827    | 284,515                                     | 289,349    | 298,624    | 261,026    | 359                               | 381     | 393     | 398     | 394                           | 484     | 502     | 480     | 754                                    | 865     | 895     | 878     | 7,765                           | 6,348   | 2,467   | 9,875   | 5,953                         | 7,784   | 6,590   | 5,988   |
| 8                        | Riverina Water                    | 183,954                                    | 191,362    | 195,664    | 203,441    |   |            |            |            | 341                               | 404     | 348     | 277     |                               |         |         |         | 341                                    | 404     | 348     | 277     | 6,389                           | 5,774   | 6,285   | 11,870  |                               |         |         |         |
| 10                       | Coffs Harbour City Council        | 263,399                                    | 279,777    | 282,974    | 285,637    | 423,783                                     | 450,136    | 461,702    | 458,031    | 360                               | 405     | 403     | 395     | 552                           | 610     | 620     | 619     | 913                                    | 1,016   | 1,023   | 1,014   | 1,708                           | 3,546   | 1,696   | 1,327   | 5,346                         | 5,318   | 8,785   | 12,647  |
| 11                       | Albury City Council               | 197,936                                    | 202,526    | 206,790    | 207,020    | 161,677                                     | 166,194    | 176,710    | 183,299    | 313                               | 343     | 311     | 277     | 475                           | 457     | 436     | 393     | 788                                    | 799     | 747     | 670     | 2,613                           | 3,559   | 2,472   | 2,271   | 0                             | 2,486   | 3,370   | 1,859   |
| 12                       | Fish River Water                  | 153,805                                    | 32,261     | 34,773     |            |   |            |            |            | 175                               |         |         |         |                               |         |         |         | 175                                    |         |         |         | 5,986                           | 429     | 1,011   |         |                               |         |         |         |
| 13                       | Tamworth Regional Council         | 170,091                                    | 185,104    | 205,537    | 209,984    | 206,649                                     | 225,723    | 233,737    | 233,215    | 539                               | 540     | 545     | 517     | 437                           | 448     | 479     | 424     | 976                                    | 989     | 1,024   | 941     | 6,585                           | 10,850  | 11,135  | 6,609   | 4,209                         | 2,381   | 9,847   | 2,425   |
| 14                       | Clarence Valley Council           | 396,514                                    | 386,815    | 386,222    | 400,037    | 248,321                                     | 259,790    | 247,953    | 281,500    | 378                               | 397     | 386     | 388     | 497                           | 548     | 503     | 462     | 876                                    | 945     | 891     | 850     | 2,063                           | 2,523   | 2,196   | 1,921   | 29,807                        | 9,746   | 8,835   | 23,583  |
| 15                       | Eurobodalla Shire Council         | 273,940                                    | 275,881    | 279,102    | 278,273    | 232,856                                     | 234,645    | 238,740    | 231,572    | 459                               | 409     | 430     | 404     | 573                           | 547     | 575     | 500     | 1,031                                  | 955     | 1,004   | 904     | 3,774                           | 2,770   | 2,340   | 2,567   | 13,950                        | 4,154   | 4,517   | 3,942   |
| 16                       | Wingecarribee Shire Council       | 168,488                                    | 170,821    | 165,872    | 168,869    | 215,054                                     | 223,090    | 274,694    | 207,497    | 344                               | 364     | 381     | 371     | 440                           | 443     | 540     | 439     | 785                                    | 808     | 921     | 810     | 2,665                           | 2,529   | 759     | 2,805   | 16,081                        | 11,869  | 2,209   | 3,129   |
| 17                       | Queanbeyan City Council           | 91,871                                     | 92,695     | 94,881     | 94,781     | 110,878                                     | 112,351    | 116,546    | 116,262    | 820                               | 876     | 975     | 945     | 446                           | 389     | 378     | 377     | 1,266                                  | 1,265   | 1,354   | 1,322   | 615                             | 574     | 2,105   | 906     | 1,740                         | 344     | 5,107   | 1,851   |
| 18                       | Dubbo City Council                | 163,697                                    | 161,960    | 164,362    | 169,800    | 158,075                                     | 156,927    | 157,374    | 179,743    | 405                               | 478     | 513     | 482     | 392                           | 375     | 355     | 350     | 797                                    | 854     | 869     | 832     | 1,886                           | 4,549   | 1,697   | 2,162   | 3,906                         | 3,128   | 2,853   | 18,923  |
| 19                       | Orange City Council               | 167,439                                    | 177,872    | 207,330    | 219,512    | 146,019                                     | 149,962    | 153,278    | 159,197    | 338                               | 361     | 390     | 339     | 350                           | 362     | 380     | 409     | 687                                    | 722     | 769     | 748     | 3,399                           | 7,200   | 27,678  | 18,487  | 1,171                         | 555     | 917     | 3,370   |
| 21                       | Bathurst Regional Council         | 150,994                                    | 153,955    | 158,217    | 163,421    | 83,872                                      | 86,745     | 88,989     | 90,813     | 455                               | 533     | 541     | 545     | 434                           | 442     | 423     | 435     | 890                                    | 975     | 964     | 980     | 4,378                           | 2,784   | 3,690   | 7,430   | 1,757                         | 4,169   | 3,044   | 5,585   |
| 22                       | Lismore City Council              | 70,255                                     | 72,529     | 75,388     | 75,248     | 176,358                                     | 185,219    | 188,544    | 190,131    | 619                               | 634     | 626     | 612     | 483                           | 479     | 474     | 454     | 1,102                                  | 1,113   | 1,100   | 1,066   | 1,698                           | 2,065   | 2,328   | 1,246   | 10,735                        | 7,126   | 2,702   | 4,693   |
| 23                       | Bega Valley Shire Council         | 182,196                                    | 184,180    | 187,762    | 190,957    | 177,877                                     | 178,101    | 181,975    | 182,250    | 588                               | 543     | 515     | 542     | 746                           | 740     | 746     | 739     | 1,334                                  | 1,283   | 1,261   | 1,281   | 5,280                           | 2,079   | 2,652   | 4,082   | 1,829                         | 2,426   | 5,652   | 4,073   |
| 24                       | Ballina Shire Council             | 103,554                                    | 105,664    | 111,296    | 68,848     | 222,336                                     | 248,546    | 264,360    | 196,454    | 604                               | 664     | 653     | 645     | 642                           | 695     | 654     | 647     | 1,246                                  | 1,359   | 1,307   | 1,292   | 1,839                           | 1,667   | 2,136   | 3,081   | 30,873                        | 27,224  | 8,944   | 5,139   |
| 25                       | Kempsey Shire Council             | 178,912                                    | 186,040    | 189,371    | 192,013    | 152,905                                     | 156,084    | 157,562    | 157,887    | 439                               | 452     | 489     | 478     | 551                           | 626     | 552     | 562     | 990                                    | 1,078   | 1,041   | 1,040   | 1,884                           | 4,700   | 5,130   | 5,356   | 2,013                         | 2,371   | 1,488   | 1,627   |
| 26                       | Essential Energy                  |  |            |            |            |   |            |            |            | 1,333                             | 1,190   | 1,303   | 1,025   | 459                           | 344     | 324     | 332     | 1,791                                  | 1,534   | 1,627   | 1,357   | 2,925                           | 3,543   | 3,155   | 3,687   | 1,466                         | 2,038   | 1,020   | 2,615   |
| 27                       | Byron Shire Council               | 51,784                                     | 54,768     | 55,364     | 55,735     | 160,854                                     | 145,192    | 147,030    | 146,929    | 590                               | 611     | 612     | 606     | 599                           | 657     | 663     | 677     | 1,189                                  | 1,269   | 1,275   | 1,283   | 139                             | 1,021   | 433     | 346     | 1,336                         | 1,541   | 1,551   | 851     |
| 28A                      | Goldenfields Water (Reticulation) | 168,568                                    | 161,583    | 148,566    | 144,593    |   |            |            |            | 569                               | 677     | 653     | 664     |                               |         |         |         | 569                                    | 677     | 653     | 664     |                                 |         |         | 1,668   |                               |         |         |         |
| 28B                      | Goldenfields Water (Bulk Water Su | 63,768                                     | 69,912     | 63,975     | 62,894     |   |            |            |            |                                   |         |         |         |                               |         |         |         |  |         |         |         |                                 |         |         | 724     |                               |         |         |         |
| 20                       | Goulburn Mulwaree Council         | 197,145                                    | 201,218    | 203,326    | 211,230    | 78,706                                      | 80,882     | 84,426     | 82,582     | 410                               | 425     | 425     | 426     | 421                           | 417     | 374     | 331     | 832                                    | 842     | 799     | 757     | 12,337                          | 2,774   | 2,589   | 6,170   | 1,580                         | 1,720   | 1,319   | 2,273   |
| 9                        | Wagga Wagga Council               |  |            |            |            | 282,003                                     | 244,885    | 251,992    | 255,145    |                                   |         |         |         | 392                           | 432     | 424     | 418     | 392                                    | 432     | 424     | 418     |                                 |         |         |         | 6,590                         | 3,761   | 4,800   | 4,382   |



APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY                           |                                   | FINANCIAL                    |         |         |         |         |    |         |     |          |      |         |      |               |      |         |      |                          |         |         |         |                       |     |         |     |                    |     |         |     |         |  |  |  |
|---|-----------------------------------|------------------------------|---------|---------|---------|---------|----|---------|-----|----------|------|---------|------|---------------|------|---------|------|--------------------------|---------|---------|---------|-----------------------|-----|---------|-----|--------------------|-----|---------|-----|---------|--|--|--|
|   |                                   | WS + SGE                     |         |         |         | WS      |    |         |     | SGE      |      |         |      | WS + SGE      |      |         |      |                          |         |         |         |                       |     |         |     |                    |     |         |     |         |  |  |  |
|   |                                   | Capital Expenditure WS + Sge |         |         |         | ERRR WS |    |         |     | ERRR Sge |      |         |      | ERRR WS & Sge |      |         |      | Dividend Paid or Payable |         |         |         | Dividend Payout Ratio |     |         |     | Net Debt to Equity |     |         |     |         |  |  |  |
|   |                                   | F16                          |         |         |         | F17     |    |         |     | F18      |      |         |      | F19           |      |         |      | F20                      |         |         |         | F21                   |     |         |     | F22                |     |         |     |         |  |  |  |
|   |                                   | (\$'000)                     |         |         |         | (%)     |    |         |     | (%)      |      |         |      | (%)           |      |         |      | (\$'000)                 |         |         |         | (%)                   |     |         |     | (%)                |     |         |     |         |  |  |  |
| 2011/12                                 |                                   | 2012/13                      |         | 2013/14 |         | 2014/15 |    | 2011/12 |     | 2012/13  |      | 2013/14 |      | 2014/15       |      | 2011/12 |      | 2012/13                  |         | 2013/14 |         | 2014/15               |     | 2011/12 |     | 2012/13            |     | 2013/14 |     | 2014/15 |  |  |  |
| Sydney Water Corporation                |                                   | 770,897                      | 695,266 | 596,483 | 627,709 | 2       | 2  | 2       | 2   | 2        | 1    | 1       | 1    | 2             | 2    | 2       | 2    | 258,698                  | 303,703 | 256,284 | 664,024 | 66                    | 70  | 54      | 129 | 94                 | 100 | 96      | 98  |         |  |  |  |
| Hunter Water Corporation                |                                   | 122,350                      | 91,670  | 110,755 | 77,397  | 2       | 3  | 4       | 3   | 2        | 2    | 2       | 2    | 2             | 3    | 2       | 2    | 22,257                   | 16,302  | 36,917  | 21,330  | 63                    | 62  | 72      | 54  | 59                 | 75  | 78      | 81  |         |  |  |  |
| Water NSW                               |                                   | 21,331                       | 18,496  | 32,822  | 13,976  |         |    |         |     |          |      |         |      |               |      |         |      |                          |         |         |         |                       |     |         |     |                    |     |         |     |         |  |  |  |
| 1                                       | Gosford City Council              | 45,922                       | 47,712  | 41,232  | 36,061  | -1      | 1  | 1       | 1.3 | 0        | 0    | 0       | 0.30 | 0             | 0    | 0       | 0.6  |                          |         |         |         |                       |     |         | 4   | 5                  | 6   | 6       |     |         |  |  |  |
| 2                                       | Wyong Shire Council               | 95,015                       | 26,831  | 26,807  | 27,357  | 1       | 1  | 1       | 2   | 0        | 0    | 0       | 0.20 | 0             | 1    | 1       | 1.0  |                          |         |         |         |                       |     |         | 10  | 10                 | 10  | 9       |     |         |  |  |  |
| 3                                       | Shoalhaven City Council           | 28,065                       | 21,900  | 24,078  | 22,629  | 1       | 1  | 1       | 2   | 2        | 2    | 2       | 4    | 2             | 2    | 2       | 3    | 2,770                    | 2,716   | 2,718   | 2,709   | 24                    | 20  | 21      | 13  | 2                  | 1   | 0       | -1  |         |  |  |  |
| 4                                       | Rous Water                        | 3,081                        | 2,613   | 5,631   | 12,120  | 1       | 1  | 2       | 2   |          |      |         |      |               |      |         |      |                          | 0       | 0       | 0       |                       |     | 0       | 0   | 0                  | 8   | 6       | 4   | 5       |  |  |  |
| 5                                       | MidCoast Water                    | 85,079                       | 22,303  | 11,476  | 6,789   | -2      | 0  | 1       | 0.7 | 2        | 3    | 3       | 3    | 0             | 1    | 2       | 2    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 25                 | 25  | 23      | 22  |         |  |  |  |
| 6                                       | Tweed Shire Council               | 39,186                       | 13,882  | 13,302  | 6,997   | 0       | 1  | 2       | 1.6 | 1        | 1    | 2       | 1.10 | 1             | 1    | 2       | 1.4  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 4                  | 3   | 2       | 0   |         |  |  |  |
| 7                                       | Port Macquarie Hastings Council   | 13,719                       | 14,133  | 9,057   | 15,863  | 1       | -1 | 2       | 1.2 | 1        | 1    | 3       | 1.50 | 1             | 0    | 2       | 1.3  | 1,711                    | 0       | 956     | 860     | 43                    | 0   | 11      | 17  | -2                 | -4  | -5      | -8  |         |  |  |  |
| 8                                       | Riverina Water                    | 6,389                        | 5,774   | 6,285   | 11,870  | 2       | 4  | 5       | 8   |          |      |         |      |               |      |         |      | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -2                 | -4  | -7      | -9  |         |  |  |  |
| 10                                      | Coffs Harbour City Council        | 7,054                        | 8,864   | 10,481  | 13,974  | 1       | 2  | 1       | 2   | 2        | 0    | 1       | 0.10 | 2             | 1    | 1       | 0.8  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 17                 | 15  | 14      | 13  |         |  |  |  |
| 11                                      | Albury City Council               | 2,613                        | 6,045   | 5,843   | 4,130   | -1      | 1  | 2       | 1.9 | 1        | 3    | 4       | 4    | 0             | 2    | 3       | 3    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 3                  | 1   | -2      | -6  |         |  |  |  |
| 12                                      | Fish River Water                  | 5,986                        | 429     | 1,011   |         | 2       | 11 | 16      |     |          |      |         |      |               |      |         |      |                          | 0       | 0       |         |                       | 0   | 0       |     | 0                  | 0   |         |     |         |  |  |  |
| 13                                      | Tamworth Regional Council         | 10,794                       | 13,231  | 20,982  | 9,034   | 2       | 2  | 3       | 2   | 2        | 2    | 3       | 3    |               |      |         |      |                          |         |         |         |                       |     |         | 0   | -2                 | -2  | -4      |     |         |  |  |  |
| 14                                      | Clarence Valley Council           | 31,870                       | 12,268  | 11,030  | 25,504  | 0       | 0  | 1       | 0.4 | 1        | 1    | 2       | 3    | 0             | 0    | 1       | 1.2  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 9                  | 10  | 10      | 11  |         |  |  |  |
| 15                                      | Eurobodalla Shire Council         | 17,724                       | 6,924   | 6,857   | 6,509   | 0       | 0  | 0       | 1.1 | 2        | 1    | 1       | 2    | 1             | 0    | 1       | 1.3  | 802                      | 553     | 135     | 530     | 49                    | -23 | 8       | 12  | 3                  | 2   | 1       | -1  |         |  |  |  |
| 16                                      | Wingecarribee Shire Council       | 18,746                       | 14,398  | 2,968   | 5,934   | 0       | 1  | 2       | 1.5 | 1        | 1    | 1       | 3    | 1             | 1    | 1       | 2    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 0                  | 0   | -1      | -4  |         |  |  |  |
| 17                                      | Queanbeyan City Council           | 2,355                        | 918     | 7,213   | 2,757   | -2      | -1 | 1       | 0.4 | -4       | -2   | 3       | 1    | -3            | -2   | 2       | 1    |                          |         |         |         |                       |     |         |     | -18                | -17 | -19     | -20 |         |  |  |  |
| 18                                      | Dubbo City Council                | 5,792                        | 7,677   | 4,550   | 21,085  | 2       | 3  | 3       | 5   | 2        | 2    | 3       | 4    | 2             | 2    | 3       | 4    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 2                  | 0   | -4      | -3  |         |  |  |  |
| 19                                      | Orange City Council               | 4,570                        | 7,755   | 28,595  | 21,857  | 2       | 4  | 3       | 4   | 1        | 1    | 2       | 3    | 1             | 3    | 2       | 4    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -12                | -13 | -14     | -12 |         |  |  |  |
| 21                                      | Bathurst Regional Council         | 6,135                        | 6,952   | 6,734   | 13,015  | 1       | 1  | 2       | 1.6 | 0        | 1    | 2       | 2.70 | 0             | 1    | 2       | 2.0  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -11                | -11 | -12     | -12 |         |  |  |  |
| 22                                      | Lismore City Council              | 12,433                       | 9,191   | 5,030   | 5,939   | -3      | -1 | 0       | 1.6 | -1       | 1    | 0       | 0.50 | -1            | 0    | 0       | 0.8  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -2                 | -1  | -1      | -2  |         |  |  |  |
| 23                                      | Bega Valley Shire Council         | 7,109                        | 4,505   | 8,305   | 8,155   | 0       | -1 | -1      | -1  | 1        | 0    | 0       | 0.70 | 1             | -1   | 0       | -0.1 |                          |         |         |         |                       |     |         |     | -1                 | -2  | -3      | -3  |         |  |  |  |
| 24                                      | Ballina Shire Council             | 32,711                       | 28,891  | 11,079  | 8,220   | -1      | -1 | 0       | 1.2 | 0        | 1    | 1       | 2.70 | 0             | 0    | 1       | 2.3  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 2                  | 8   | 11      | 17  |         |  |  |  |
| 25                                      | Kempsey Shire Council             | 3,897                        | 7,072   | 6,618   | 6,983   | -1      | 0  | 0       | 1.3 | 0        | -1   | 0       | 0.40 | -1            | 0    | 0       | 0.9  |                          |         |         |         |                       |     |         |     | 7                  | 8   | 8       | 8   |         |  |  |  |
| 26                                      | Essential Energy                  | 4,390                        | 5,580   | 4,175   | 6,302   |         |    |         |     |          |      |         |      |               |      |         |      |                          | 0       | 0       |         |                       | 0   | 0       |     |                    |     |         |     |         |  |  |  |
| 27                                      | Byron Shire Council               | 1,476                        | 2,562   | 1,984   | 1,197   | 1       | -1 | 2       | 1.6 | 2        | 1    | 4       | 4    | 2             | 1    | 3       | 3.3  |                          |         |         |         |                       |     |         |     | 21                 | 21  | 17      | 14  |         |  |  |  |
| 28A                                     | Goldenfields Water (Reticulation) |                              |         |         | 1,668   | 0       | 1  | 2       | 4   |          |      |         |      |               |      |         |      | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -5                 | -9  | -9      | -13 |         |  |  |  |
| 28B                                     | Goldenfields Water (Bulk Water Su |                              |         |         | 724     | -2      | 1  | 1       | 0.0 |          |      |         |      |               |      |         |      | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -11                | -10 | -11     | -15 |         |  |  |  |
| 20                                      | Goulburn Mulwaree Council         | 13,917                       | 4,495   | 3,908   | 8,443   | 1       | 1  | 1       | 1   | 4        | 6    | 6       | 6    | 2             | 2    | 2       | 2    |                          |         |         |         |                       |     |         |     | 1                  | -2  | -5      | -6  |         |  |  |  |
| 9                                       | Wagga Wagga Council               | 6,590                        | 3,761   | 4,800   | 4,382   |         |    |         |     | 1        | 1    | 0       | 1.30 |               |      |         |      | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   |                    | 6   | 6       | 5   |         |  |  |  |
| LWU Range Max                           |                                   | 95,015                       | 47,712  | 41,232  | 36,061  | 2       | 11 | 16      | 8   | 4.3      | 5.8  | 5.6     | 6    | 2.0           | 2.6  | 3.3     | 4    | 2,770                    | 2,716   | 2,718   | 2,709   | 49                    | 20  | 21      | 17  | 25                 | 25  | 23      | 22  |         |  |  |  |
| LWU Range Min                           |                                   | 1,476                        | 429     | 1,011   | 724     | -3      | -1 | -1      | -1  | -3.5     | -2.2 | -0.4    | 0    | -2.7          | -1.6 | -0.2    | 0    | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | -18                | -17 | -19     | -20 |         |  |  |  |
| Median of NMU Indicators shown in Table |                                   | 7,109                        | 7,677   | 6,857   | 8,188   | 0       | 1  | 1       | 1.6 | 1.1      | 0.7  | 1.7     | 2.50 | 0.5           | 0.6  | 1.6     | 1.4  | 0                        | 0       | 0       | 0       | 0                     | 0   | 0       | 0   | 2                  | 0   | -1      | -2  |         |  |  |  |

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| WATER UTILITY                           |                                   | FINANCIAL      |         |          |         |                      |         |          |         |         |         |          |         |                         |         |               |         |                          |         |               |         |                                  |         |         |         |                              |         |         |         |            |         |         |         |   |
|---|-----------------------------------|----------------|---------|----------|---------|----------------------|---------|----------|---------|---------|---------|----------|---------|-------------------------|---------|---------------|---------|--------------------------|---------|---------------|---------|----------------------------------|---------|---------|---------|------------------------------|---------|---------|---------|------------|---------|---------|---------|---|
|   |                                   | WS + SGE       |         |          |         |                      |         |          |         |         |         |          |         | WS                      |         |               |         | SGE                      |         |               |         | WS                               |         |         |         | SGE                          |         |         |         | WS & SGE   |         |         |         |   |
|   |                                   | Interest Cover |         |          |         | Net Profit after Tax |         |          |         | CSO     |         |          |         | Capital Works Grants WS |         |               |         | Capital Works Grants SGE |         |               |         | Water Supply Capital Expenditure |         |         |         | Sewerage Capital Expenditure |         |         |         | NPAT Ratio |         |         |         |   |
|   |                                   |                |         |          |         |                      |         |          |         |         |         |          |         |                         |         |               |         |                          |         |               |         |                                  |         |         |         |                              |         |         |         |            |         |         |         |   |
|   |                                   | F23            |         |          |         | F24                  |         |          |         | F25     |         |          |         | F26                     |         |               |         | F27                      |         |               |         | F28                              |         |         |         | F29                          |         |         |         | F30        |         |         |         |   |
| (\$'000)                                |                                   |                |         | (\$'000) |         |                      |         | (\$'000) |         |         |         | (\$'000) |         |                         |         | (\$/property) |         |                          |         | (\$/property) |         |                                  |         |         |         |                              |         |         |         |            |         |         |         |   |
|   |                                   | 2011/12        | 2012/13 | 2013/14  | 2014/15 | 2011/12              | 2012/13 | 2013/14  | 2014/15 | 2011/12 | 2012/13 | 2013/14  | 2014/15 | 2011/12                 | 2012/13 | 2013/14       | 2014/15 | 2011/12                  | 2012/13 | 2013/14       | 2014/15 | 2011/12                          | 2012/13 | 2013/14 | 2014/15 | 2011/12                      | 2012/13 | 2013/14 | 2014/15 | 2011/12    | 2012/13 | 2013/14 | 2014/15 |   |
| Sydney Water Corporation                |                                   | 1              | 2       | 2        | 2       | 392,403              | 433,862 | 472,389  | 513,497 | 159,876 | 162,463 | 160,559  | 163,091 | 0                       | 0       | 0             | 0       | 2,196                    | 6,989   | 15,938        | 4,830   | 165                              | 140     | 108     | 80      | 268                          | 243     | 221     | 261     | 14         | 17      | 18      | 19      |   |
| Hunter Water Corporation                |                                   | 2              | 1       | 2        | 2       | 35,441               | 26,501  | 51,183   | 39,880  | 13,489  | 14,250  | 14,043   | 14,285  | -116                    | 112     | 281           | 219     |                          |         | 0             | 0       | 161                              | 130     | 329     | 154     | 390                          | 278     | 148     | 179     | 13         | 9       | 17      | 13      |   |
| Water NSW                               |                                   |                |         |          |         |                      |         |          |         |         |         |          |         |                         |         |               |         |                          |         |               |         |                                  |         |         |         |                              |         |         |         |            |         |         |         |   |
| 1                                       | Gosford City Council              | 0              | 0       | 1        | 2       | -10,683              | -7,918  | -2,067   | 4,865   | 641     | 1,263   | 1,251    | 1,242   | 1,829                   | 2,168   | 1,068         | 101     |                          |         |               |         | 198                              | 183     | 183     | 94      | 465                          | 504     | 403     | 418     | -14        | -9      | -2      | 5       |   |
| 2                                       | Wyong Shire Council               | 0              | 1       | 1        | 1       | -16,199              | -8,439  | -5,308   | 1,174   | 1,429   | 1,447   | 1,398    | 1,374   | 265                     | 637     | 966           | 61      |                          |         |               |         | 1,390                            | 234     | 328     | 250     | 181                          | 212     | 110     | 186     | -22        | -11     | -7      | 1       |   |
| 3                                       | Shoalhaven City Council           | 65             | >100    | 59       | >100    | 11,631               | 13,346  | 12,865   | 20,773  | 1,072   | 1,068   | 1,053    | 1,053   | 0                       | 0       | 0             | 0       | 7,932                    | 3,872   | 0             | 8,502   | 130                              | 95      | 230     | 218     | 540                          | 424     | 316     | 295     | 19         | 20      | 20      | 29      |   |
| 4                                       | Rous Water                        | 2              | 4       | 3        | 4       | -790                 | 584     | 1,922    | 2,523   | 11      | 10      | 10       | 10      | 0                       | 0       | 0             | 0       |                          |         |               |         |                                  |         |         |         |                              |         |         |         |            |         |         |         |   |
| 5                                       | MidCoast Water                    | 0              | 1       | 1        | 1       | 28,332               | -6,934  | -5,442   | -2,447  | 980     | 1,011   | 922      | 931     | 0                       | 0       | 0             | 0       | 4,980                    | 1,592   | 0             | 0       | 1,238                            | 286     | 198     | 80      | 1,080                        | 323     | 110     | 105     | 27         | -10     | -8      | -4      |   |
| 6                                       | Tweed Shire Council               | 2              | 2       | 5        | 3       | -486                 | -1,762  | 14,437   | 6,521   | 789     | 766     | 752      | 745     | 0                       | 0       | 933           | 4       | 2,203                    | 1,129   | 325           | 0       | 212                              | 173     | 276     | 61      | 1,050                        | 280     | 149     | 164     | -1         | -4      | 21      | 11      |   |
| 7                                       | Port Macquarie Hastings Council   | >100           | 0       | 23       | >100    | 3,980                | -2,533  | 8,736    | 5,070   | 756     | 745     | 731      | 729     | 1,018                   | 3,832   | 1,356         | 0       | 352                      | 0       | 0             | 0       | 259                              | 213     | 82      | 325     | 221                          | 285     | 240     | 215     | 9          | -6      | 14      | 10      |   |
| 8                                       | Riverina Water                    | >100           | >100    | >100     | >100    | 382                  | 3,929   | 7,049    | 11,244  | 216     | 222     | 229      | 194     | 136                     | 256     | 0             | 0       |                          |         |               |         | 218                              | 196     | 213     | 397     |                              |         |         |         | 2          | 15      | 26      | 37      |   |
| 10                                      | Coffs Harbour City Council        | 1              | 1       | 1        | 1       | 1,540                | -2,253  | -3,251   | -3,274  | 518     | 517     | 507      | 505     | 0                       | 0       | 0             | 0       | 420                      | 542     | 1,019         | 294     | 69                               | 143     | 68      | 53      | 230                          | 228     | 373     | 533     | 3          | -5      | -7      | -7      |   |
| 11                                      | Albury City Council               | 0              | 13      | 54       | >100    | -1,695               | 5,320   | 10,866   | 9,875   | 321     | 332     | 321      | 323     | 0                       | 0       | 0             | 0       | 0                        | 0       | 0             | 0       | 114                              | 153     | 105     | 88      | 0                            | 115     | 154     | 78      | -7         | 16      | 29      | 28      |   |
| 12                                      | Fish River Water                  | 0              | 0       | 0        | 0       |                      | 3,672   | 4,568    |         |         | 0       | 0        |         | 0                       | 0       | 0             |         |                          |         |               | 255     |                                  |         |         |         |                              |         |         |         | 40         | 45      |         |         |   |
| 13                                      | Tamworth Regional Council         | 6              | 5       | 8        | 10      | 7,275                | 6,191   | 11,835   | 6,561   | 414     | 403     | 391      | 403     | 695                     | 4,843   | 5,262         | 602     |                          |         |               |         | 314                              | 511     | 520     | 305     | 222                          | 124     | 509     | 123     | 18         | 16      | 27      | 16      |   |
| 14                                      | Clarence Valley Council           | 1              | 0       | 1        | 1       | -2,870               | -3,942  | 1,735    | 900     | 467     | 465     | 456      | 446     | -57                     | -89     | 0             | 0       | 5,917                    | 2,516   | 2,779         | 878     | 93                               | 118     | 103     | 90      | 2,043                        | 666     | 603     | 1,603   | -10        | -13     | 6       | 3       |   |
| 15                                      | Eurobodalla Shire Council         | 2              | 1       | 3        | 8       | 1,636                | -2,382  | 1,702    | 4,352   | 416     | 403     | 398      | 390     | 107                     | 0       | 0             | 49      | 593                      | -1,635  | 0             | 110     | 193                              | 142     | 120     | 131     | 780                          | 232     | 250     | 218     | 5          | -8      | 5       | 13      |   |
| 16                                      | Wingecarribee Shire Council       | 3              | 5       | 8        | 15      | -3,093               | 205     | 4,705    | 6,966   | 338     | 346     | 345      | 357     | 0                       | 0       | 0             | 0       | 9,819                    | 4,800   | 305           | 450     | 143                              | 135     | 40      | 146     | 1,095                        | 808     | 141     | 199     | -13        | 1       | 16      | 24      |   |
| 17                                      | Queanbeyan City Council           | 0              | 0       | >100     | >100    | -4,301               | -4,163  | 4,798    | 2,294   | 174     | 157     | 162      | 162     | 0                       | 0       | 0             | 0       |                          |         |               |         | 38                               | 35      | 128     | 52      | 109                          | 21      | 306     | 107     | -21        | -18     | 15      | 7       |   |
| 18                                      | Dubbo City Council                | 10             | 13      | >100     | >100    | 2,640                | 6,373   | 7,465    | 14,665  | 203     | 196     | 193      | 188     | 0                       | 16      | 0             | 0       | 0                        | 0       | 0             | 0       | 112                              | 269     | 99      | 123     | 249                          | 198     | 178     | 1,152   | 12         | 21      | 24      | 39      |   |
| 19                                      | Orange City Council               | >100           | >100    | >100     | >100    | 5,200                | 9,494   | 9,465    | 13,597  | 266     | 264     | 261      | 259     | 0                       | 0       | 26,742        | 9,130   | 0                        | 0       | 0             | 0       | 202                              | 425     | 1,610   | 1,055   | 74                           | 34      | 56      | 204     | 22         | 35      | 34      | 43      |   |
| 21                                      | Bathurst Regional Council         | >100           | >100    | >100     | >100    | 832                  | 2,031   | 4,798    | 4,858   | 214     | 211     | 210      | 216     | 836                     | 21      | 0             | 0       | 0                        | 0       | 0             | 0       | 290                              | 183     | 237     | 473     | 118                          | 276     | 197     | 352     | 4          | 9       | 18      | 18      |   |
| 22                                      | Lismore City Council              | 0              | >100    | >100     | 14      | -3,092               | -544    | -154     | 617     | 266     | 286     | 259      | 210     | 0                       | 0       | 363           | 0       | 0                        | 0       | 0             | 0       | 120                              | 145     | 163     | 87      | 851                          | 562     | 212     | 367     | -15        | -3      | -1      | 3       |   |
| 23                                      | Bega Valley Shire Council         |                |         |          |         | 2,066                | -3,297  | -714     | -487    | 276     | 278     | 275      | 272     |                         |         |               |         |                          |         |               |         | 369                              | 145     | 184     | 283     | 150                          | 200     | 464     | 334     | 8          | -13     | -3      | -2      |   |
| 24                                      | Ballina Shire Council             | 0              | 1       | 1        | 2       | -1,915               | -2,808  | -55      | -10,138 | 319     | 319     | 308      | 305     | 25                      | 47      | 0             | 0       | 0                        | 0       | 0             | 0       | 127                              | 119     | 151     | 215     | 2,313                        | 1,981   | 636     | 364     | -8         | -12     | 0       | -63     |   |
| 25                                      | Kempsey Shire Council             | 0              | 0       | 0        | 1       | -4,348               | -3,391  | -4,674   | -694    | 270     | 266     | 257      | 258     |                         |         |               |         |                          |         |               |         | 150                              | 373     | 411     | 428     | 216                          | 254     | 153     | 166     | -26        | -19     | -27     | -3      |   |
| 26                                      | Essential Energy                  |                |         |          |         |                      | 3,041   | 427      | 676     | 276     | 261     | 363      | 455     | 0                       | 0       | 0             | 0       | 0                        | 0       | 0             | 0       | 278                              | 338     | 300     | 350     | 151                          | 210     | 105     | 269     |            | 13      | 2       | 3       |   |
| 27                                      | Byron Shire Council               | 1              | 0       | 2        | 2       | -543                 | -3,320  | 2,071    | 2,755   | 167     | 163     | 157      | 156     |                         |         |               |         |                          |         |               |         | 13                               | 92      | 39      | 31      | 127                          | 148     | 147     | 80      | -3         | -15     | 9       | 11      |   |
| 28A                                     | Goldenfields Water (Reticulation) | 0              | >100    | >100     | >100    | 0                    | 2,338   | 4,138    | 5,909   | 107     | 106     | 100      | 97      | 4,101                   | 0       | 0             | 0       |                          |         |               |         |                                  |         |         | 162     |                              |         |         |         | 0          | 19      | 30      | 40      |   |
| 28B                                     | Goldenfields Water (Bulk Water Su | 0              | >100    | >100     | >100    | 0                    | 796     | 877      | 322     | 0       | 0       | 0        | 0       | 3,356                   | 0       | 0             | 0       |                          |         |               |         |                                  |         |         |         |                              |         |         |         |            | 0       | 16      | 17      | 6 |
| 20                                      | Goulburn Mulwaree Council         | 4              | 8       | 10       | 10      | 3,320                | 5,673   | 6,074    | 5,794   | 195     | 194     | 185      | 47      | 12,168                  | 1,172   | 320           | 1,150   | 43                       | 116     | 305           | 450     | 1,146                            | 279     | 249     | 551     | 153                          | 179     | 125     | 212     | 17         | 27      | 28      | 27      |   |
| 9                                       | Wagga Wagga Council               | 1              | 1       | 0        | 2       | -164                 | -862    | -1,366   | 1,052   | 169     | 165     | 163      | 159     |                         |         |               |         | 0                        | 0       | 0             | 0       |                                  |         |         |         | 261                          | 144     | 183     | 161     | -1         | -5      | -8      | 5       |   |
| LWU Range Max                           |                                   | 65             | >100    | >100     | >100    | 28,332               | 13,346  | 14,437   | 20,773  | 1,429   | 1,447   | 1,398    | 1,374   | 12,168                  | 4,843   | 26,742        | 9,130   | 9,819                    | 4,800   | 2,779         | 8,502   | 1,390                            | 511     | 1,610   | 1,055   | 2,313                        | 1,981   | 636     | 1,603   | 27         | 40      | 45      | 43      |   |
| LWU Range Min                           |                                   | 0              | 0       | 0        | 0       | -16,199              | -8,439  | -5,442   | -10,138 | 0       | 0       | 0        | 0       | -57                     | -89     | 0             | 0       | 0                        | -1,635  | 0             | 0       | 13                               | 35      | 39      | 31      | 0                            | 21      | 56      | 78      | -26        | -19     | -27     | -63     |   |
| Median of NMU Indicators shown in Table |                                   | 1              | >100    | >100     | 2       | 0                    | -544    | 2,071    | 3,554   | 276     | 278     | 275      | 289     | 0                       | 0       | 0             | 0       | 43                       | 0       | 0             | 0       | 198                              | 178     | 184     | 162     | 226                          | 230     | 190     | 214     | 0          | -3      | 14      | 10      |   |



## APPENDIX F: NMUs - NATIONAL PERFORMANCE REPORT 2014-15

| WATER UTILITY   |  | FINANCIAL                            |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
|---|--|--------------------------------------|---------|---------|---------|---------------------------------------|---------|---------|---------|---|---------|---------|---------|--------------------------------------|---------|---------|---------|---------------------------------------|---------|---------|---------|--|---------|---------|---------|---------------------------------------|---------|---------|---------|--|---------|---------|---------|
|   |  | WS                                   |         |         |         | SGE                                   |         |         |         | WS & SGE  |         |         |         | WS                                   |         |         |         | SGE                                   |         |         |         | WS & SGE                                   |         |         |         | WS                                    |         |         |         | SGE                                    |         |         |         |
|   |  | Revenue per ML for WS - Bulk utility |         |         |         | Revenue per ML for Sge - Bulk utility |         |         |         | Income for Utility per ML WS & SGE Bulk utility |         |         |         | Operating cost OMA WS - Bulk utility |         |         |         | Operating cost OMA SGE - Bulk utility |         |         |         | Operating cost OMA WS & SGE - Bulk utility |         |         |         | Capital Expenditure WS - Bulk utility |         |         |         | Capital Expenditure SGE - Bulk utility |         |         |         |
|   |  | F5.1                                 |         |         |         | F6.1                                  |         |         |         | F7.1  |         |         |         | F11.1                                |         |         |         | F12.1                                 |         |         |         | F13.1                                      |         |         |         | F28.1                                 |         |         |         | F29.1                                  |         |         |         |
|   |  | (\$/ML)                              |         |         |         | (\$/ML)                               |         |         |         | (\$/ML)   |         |         |         | (\$/ML)                              |         |         |         | (\$/ML)                               |         |         |         | (\$/ML)                                    |         |         |         | (\$/ML)                               |         |         |         |  |         |         |         |
|   |  | 2011/12                              | 2012/13 | 2013/14 | 2014/15 | 2011/12                               | 2012/13 | 2013/14 | 2014/15 | 2011/12   | 2012/13 | 2013/14 | 2014/15 | 2011/12                              | 2012/13 | 2013/14 | 2014/15 | 2011/12                               | 2012/13 | 2013/14 | 2014/15 | 2011/12                                    | 2012/13 | 2013/14 | 2014/15 | 2011/12                               | 2012/13 | 2013/14 | 2014/15 | 2011/12                                | 2012/13 | 2013/14 | 2014/15 |
| Sydney Water Corporation<br>Hunter Water Corporation<br>Water NSW |  | 507                                  | 386     | 378     | 394     |                                       |         |         |         | 515   | 393     | 386     | 396     | 240                                  | 163     | 189     | 194     |                                       |         |         |         | 240  | 163     | 189     | 194     | 49                                    | 34      | 59      | 27      |  |         |         |         |
| 1   | Gosford City Council                   |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 2   | Wyong Shire Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 3   | Shoalhaven City Council                |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 4   | Rous Water                             | 1,946                                | 1,873   | 1,987   | 2,058   |                                       |         |         |         | 1,939   | 1,845   | 1,960   | 2,042   | 881                                  | 1,004   | 981     | 988     |                                       |         |         |         | 881  | 1,004   | 981     | 988     | 277                                   | 1,908   | 489     | 1,084   |  |         |         |         |
| 5   | MidCoast Water                         |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 6   | Tweed Shire Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 7   | Port Macquarie Hastings Council        |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 8   | Riverina Water                         |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 10  | Coffs Harbour City Council             |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 11  | Albury City Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 12  | Fish River Water                       | 1,068                                | 933     | 952     |         |                                       |         |         |         | 1,068   | 933     | 952     |         | 723                                  | 481     | 502     |         |                                       |         |         |         | 592  | 481     | 319     |         | 859                                   | 59      | 95      |         |  |         |         |         |
| 13  | Tamworth Regional Council              |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 14  | Clarence Valley Council                |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 15  | Eurobodalla Shire Council              |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 16  | Wingecarribee Shire Council            |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 17  | Queanbeyan City Council                |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 18  | Dubbo City Council                     |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 19  | Orange City Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 21  | Bathurst Regional Council              |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 22  | Lismore City Council                   |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 23  | Bega Valley Shire Council              |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 24  | Ballina Shire Council                  |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 25  | Kempsey Shire Council                  |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 26  | Essential Energy                       |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 27  | Byron Shire Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 28A   | Goldenfields Water (Reticulation)      |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 28B   | Goldenfields Water (Bulk Water Supply) | 507                                  | 542     | 539     | 584     |                                       |         |         |         | 507   | 544     | 539     | 584     | 320                                  | 313     | 311     |         |                                       |         |         |         | 320  | 313     | 311     |         | 0                                     | 0       |         |         |  |         |         |         |
| 20  | Goulburn Mulwaree Council              |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| 9   | Wagga Wagga Council                    |                                      |         |         |         |                                       |         |         |         |   |         |         |         |                                      |         |         |         |                                       |         |         |         |  |         |         |         |                                       |         |         |         |  |         |         |         |
| LWU Range Max   |  | 1,946                                | 1,873   | 1,987   | 2,058   |                                       |         |         |         | 1,939   | 1,845   | 1,960   | 2,042   | 881                                  | 1,004   | 981     | 988     |                                       |         |         |         | 881  | 1,004   | 981     | 988     | 859                                   | 1,908   | 489     | 1,084   |  |         |         |         |
| LWU Range Min   |  | 507                                  | 542     | 539     | 584     |                                       |         |         |         | 507   | 544     | 539     | 584     | 723                                  | 320     | 313     | 311     |                                       |         |         |         | 592  | 320     | 313     | 311     | 277                                   | 59      | 0       | 0       |  |         |         |         |
| Median of NMU Indicators shown in Table                           |  | 1,068                                | 933     | 952     | 1,321   |                                       |         |         |         | 1,068   | 933     | 952     | 1,313   | 802                                  | 481     | 502     | 650     |                                       |         |         |         | 737  | 481     | 319     | 650     | 568                                   | 984     | 95      | 542     |  |         |         |         |



## APPENDIX G: NSW GREENHOUSE GAS CALCULATOR

### Overview

Greenhouse gases are produced from the use of fossil fuel in a water utility's operations, including transport and office accommodation, and are also produced from the chemical reactions resulting from the processing of sewage in a sewage treatment works.

The mass of greenhouse gas emissions can be calculated by applying appropriate conversion factors to the quantities of fuel consumed and by using appropriate formulae to calculate emissions from sewage treatment works.

The Federal Government provides guidance in the calculation of emissions and has published supporting information including tables of conversion factors, formula for the calculation of emissions from sewage treatment works and a calculator. See National Greenhouse and Energy Reporting published by the Federal Department of Environment at the following web address:

<http://www.environment.gov.au/climate-change/greenhouse-gas-measurement/nger>

However, the calculation of emissions is relatively complicated and, for sewage treatment works, requires the measurement or estimation of a number of factors. It requires the utility to assess the relevance and suitability of the appropriate factors and to apply these factors to its situation.

In order to assist NSW utilities in estimating the greenhouse gas emissions resulting from their water and sewerage operations, DPI Water has developed this greenhouse gas calculator for use by NSW utilities. This will simplify and standardise the process.

The calculator is a spreadsheet based on the Federal Government factors and also includes some simplifying assumptions for sewage treatment.

Utilities should review these assumptions to assess whether they are appropriate for their situation.

Where a utility has specific data or different circumstances, the calculator may not apply.

To calculate greenhouse gas emissions, utilities should follow steps A to D in the Instructions worksheet (see pink tab **Instructions**). These steps comprise:

- A** Emissions from water and sewerage operations - excluding STWs
- B** Emissions from Sewage Treatment Works (STWs)
- C** Carbon Offsets
- D** Total Emissions

Calculation of emissions for an example utility is shown at the green tabs **Example** and **Example STW**.

### Instructions

Calculate the emissions from your water and sewerage operations and also from your sewage treatment works by following steps A to D below<sup>46</sup>. The resulting emissions should be entered in your Performance Monitoring Database. This Calculator Spreadsheet is for guidance only and should not be forwarded to DPI Water.

An example is provided showing the procedure for calculation of emissions (see worksheets "**Example**" and "**Example STW**" (green tab)).

#### **A. Emissions from Water and Sewerage Operations - excluding Sewage Treatment Works (STWs)**

To calculate emissions from water and sewerage operations, go to worksheet "**Emissions**" (orange tab).

<sup>46</sup> Examples of common emission sources are shown in worksheet "**Emission Source Examples**" (yellow tab).

Collect the relevant data (quantities of each fuel combusted including electricity) for your water, sewerage and other operations.

Insert the quantities of each fuel in the appropriate blue shaded cells.

#### **B. Emissions from Sewage Treatment Works (STWs)**

To calculate emissions from the sewage treatment works, go to worksheet **"STW 1" (orange tab)**.

Insert the relevant data in the blue or green cells for your STW.

However, as an alternative to using the tables, you may use the graphs of emissions from typical sewage treatment works provided in the worksheet **"STW Graphs" (orange tab)**.

Repeat as necessary for each of your STWs in worksheets **"STW 2"** to **"STW 10" (orange tabs)**.

The emissions from each of your STWs are linked into the blue shaded cells for sewage treatment in the worksheet **"Emissions" (orange tab)**.

If you elect to use the **"STW Graphs"** worksheet to determine the emissions from an STW, override the value shown in the **"Emissions"** worksheet with the estimate obtained from the **"STW Graphs"** worksheet.

#### **C. Carbon Offsets**

Go to the worksheet **"Emissions" (orange tab)**.

Determine your utility's accredited sequestration (usually in the form of tonnes of carbon in tree plantations).

Enter the accredited sequestration in the blue shaded cell for sequestration (as a NEGATIVE NUMBER).

#### **D. Total Emissions**

Your utility's total greenhouse gas emissions will be shown at the bottom of worksheet **"Emissions" (orange tab)**.

Note that the worksheet **"Emissions"** is based on Tables 1 to 4 of the Australian Government Department of Climate Change "National Greenhouse Accounts (NGA) Factors". DPI Water will update this worksheet as updates become available.

Calculation of Emissions from Water and Sewerage Operations

A. CALCULATION OF EMISSIONS FROM WATER AND SEWERAGE OPERATIONS BY NSW WATER UTILITIES

Based on the NATIONAL GREENHOUSE ACCOUNTS (NGA) FACTORS updated annually

Insert Council Name and Year

- 1. Enter the annual quantity of fuel used in water, sewerage or other operations in the appropriate blue cells below.
- 2. Enter the data for each of your utility's STWs on sheets STW 1 to STW 10 OR override the value shown in the table below using the estimated emissions from the STW Graphs worksheet.
- 3. Enter the carbon offset (if any) in the cell for sequestration (as a NEGATIVE number).
- 4. The **TOTAL EMISSIONS** (tonnes CO2-e) are shown at the bottom of the table.

| FUEL or PROCESS UTILISED   | UNITS   | ANNUAL QUANTITY of FUEL USED                                |   |   |            | GREENHOUSE GAS EMISSIONS |                    |          |                 |
|--|---------|---|---|---|------------|--------------------------|--------------------|----------|-----------------|
|  |         | WATER SUPPLY OPERATIONS                                     | SEWERAGE OPERATIONS                                 | OTHER*  | TOTAL USED | WATER SUPPLY             | SEWERAGE OPERATION | OTHER*   | TOTAL EMISSIONS |
|  |         | Water source, storage, treatment, transfer and distribution | Sewage collection, storage, treatment and discharge | Transport (vehicles), office buildings, sequestration |            | t CO2 -e                 | t CO2 -e           | t CO2 -e | t CO2 -e        |
| ELECTRICITY PURCHASED FROM GRID  |         | Enter data into the blue cells only                         |   |   |            |                          |                    |          |                 |
| Electricity purchased from NSW or ACT Grid   | kWh     |   |   |   |            |                          |                    |          |                 |
| Electricity purchased from QLD Grid  | kWh     |   |   |   |            |                          |                    |          |                 |
| Electricity purchased from Vic Grid  | kWh     |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |
| LIQUID FUELS (Transport)   |         |   |   |   |            |                          |                    |          |                 |
| Gasoline for use in an aircraft (AVGAS)  | kL      |   |   |   |            |                          |                    |          |                 |
| Kerosene for use in an aircraft (AVTUR)  | kL      |   |   |   |            |                          |                    |          |                 |
| Fuel oil (General transport)   | kL      |   |   |   |            |                          |                    |          |                 |
| Biodiesel (General transport)  | kL      |   |   |   |            |                          |                    |          |                 |
| Gasoline (Vehicles)  | kL      |   |   |   |            |                          |                    |          |                 |
| Diesel oil (Vehicles)  | kL      |   |   |   |            |                          |                    |          |                 |
| Liquefied petroleum gas (Vehicles)   | kL      |   |   |   |            |                          |                    |          |                 |
| Ethanol (Vehicles)   | kL      |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |
| LIQUID FUELS (Non Transport)   |         |   |   |   |            |                          |                    |          |                 |
| Petroleum based oils (other than fuel, eg lubricants)  | kL      |   |   |   |            |                          |                    |          |                 |
| Gasoline (other than for use in an aircraft)   | kL      |   |   |   |            |                          |                    |          |                 |
| Kerosene (other than for use in an aircraft)   | kL      |   |   |   |            |                          |                    |          |                 |
| Heating oil  | kL      |   |   |   |            |                          |                    |          |                 |
| Diesel oil   | kL      |   |   |   |            |                          |                    |          |                 |
| Fuel oil   | kL      |   |   |   |            |                          |                    |          |                 |
| Liquefied petroleum gas  | kL      |   |   |   |            |                          |                    |          |                 |
| Biodiesel  | kL      |   |   |   |            |                          |                    |          |                 |
| Ethanol for use in an internal combustion engine   | kL      |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |
| SOLID FUELS (Non Transport)  |         |   |   |   |            |                          |                    |          |                 |
| Black coal   | t       |   |   |   |            |                          |                    |          |                 |
| Brown coal   | t       |   |   |   |            |                          |                    |          |                 |
| Coking coal  | t       |   |   |   |            |                          |                    |          |                 |
| Brown coal briquettes  | t       |   |   |   |            |                          |                    |          |                 |
| Industrial materials (eg. tyres) derived from fossil fuels   | t       |   |   |   |            |                          |                    |          |                 |
| Municipal materials (non-biomass)  | t       |   |   |   |            |                          |                    |          |                 |
| Municipal and industrial materials (Biomass)   | t       |   |   |   |            |                          |                    |          |                 |
| Wood (dry)   | t       |   |   |   |            |                          |                    |          |                 |
| Wood (Green and air dried)   | t       |   |   |   |            |                          |                    |          |                 |
| Bagasse  | t       |   |   |   |            |                          |                    |          |                 |
| Charcoal   | t       |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |
| NATURAL GAS (Non Transport) (Adapted from Table 2 of NGA)  |         |   |   |   |            |                          |                    |          |                 |
| Coal seam methane  | m³      |   |   |   |            |                          |                    |          |                 |
| Coal mine waste gas  | m³      |   |   |   |            |                          |                    |          |                 |
| Town gas   | m³      |   |   |   |            |                          |                    |          |                 |
| Liquefied natural gas  | kL      |   |   |   |            |                          |                    |          |                 |
| Landfill or sludge biogas (methane only)   | m³      |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |
| SEWAGE TREATMENT (emissions from STW spreadsheets, OR override with estimated emissions from STW Graphs worksheet) |         |   |   |   |            |                          |                    |          |                 |
| STW 1  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 2  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 3  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 4  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 5  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 6  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 7  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 8  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 9  | t       |   |   |   |            |                          | 0.0                |          |                 |
| STW 10   | t       |   |   |   |            |                          | 0.0                |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            |                          | 0.0                |          | 0.0             |
| SEQUESTRATION  |         |   |   |   |            |                          |                    |          |                 |
| Carbon Offset  | t       |   |   |   |            |                          |                    |          |                 |
| SUBTOTAL   | t CO2-e |   |   |   |            |                          |                    | 0.0      | 0.0             |
| TOTAL EMISSIONS  |         |   |   |   |            |                          |                    |          |                 |
| TOTAL EMISSIONS  | t CO2-e |   |   |   |            | 0.0                      | 0.0                | 0.0      | 0.0             |

\* OTHER is the estimated water and sewerage component of the fuel used in Councils' office buildings and vehicles and can also include sequestration as an offset (ie. a negative value).



## Calculation of Greenhouse Gas Emissions from Sewage Treatment Works

### B. CALCULATION OF GREENHOUSE GAS EMISSIONS FROM SEWAGE TREATMENT WORKS (STWs) - 2015

|       |  |  |
|-------|--|--|
| STW 1 | NAME OF STW  |  |
|       | Description of STW (eg. Trickling filter and oxidation pond) |  |

**INSTRUCTIONS**

To obtain an approximate GHG emission value, insert data in blue cells steps 1 or 2 and 3 and 7. Green cells may be left blank.

However, if more detailed information is available, insert this data in the relevant green cell. This will provide a more accurate estimate.

Total emissions are shown at step 18. To calculate emissions for additional STWs, see worksheets **STW 2 to STW 10** (orange tabs).

| SEWAGE TREATMENT WORKS |   | Input   | Result  |
|------------------------|---|---|---|
| 1 Inflow to STW        | Insert volume of sewage entering STW per year (if known)<br><b>OR</b>   | Volume influent = <span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | <span style="border: 1px solid black; display: inline-block; width: 20px; text-align: center;">0</span> ML  |
| 2 Population served    | Insert actual population served by STW (if inflow is known, this may be left blank)<br>(If population is unknown, it is approximated by assuming ADWF for residential sewage is 200L/cap/d) | Pop served = <span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>      | <span style="border: 1px solid black; display: inline-block; width: 20px; text-align: center;">0</span> No. |

| EMISSIONS FROM TREATMENT OF WASTEWATER |  | Input  | Result |
|--|--|--|--------|
| 3 Type of Treatment                    | For wastewater treatment - select methane correction factor from Table G below   | MCF <sub>ww</sub> = <span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  |        |
| 4 COD in influent                      | Insert quantity of COD in influent wastewater (if unknown leave blank)<br>(If BOD in influent is known, COD in influent can be calculated from BOD x 2.6)  | COD <sub>w</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   | tonnes |
|  | <b>OR</b> If COD in influent is unknown, it is approximated by using a default of 0.0585 tonnes/capita   | COD <sub>w</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span>                       | tonnes |
| 5 COD in effluent                      | Insert quantity of COD in effluent leaving the STW (if unknown leave blank)<br>(If BOD in effluent is known, COD can be calculated from BOD x 2.6)<br>If COD in effluent is unknown, a default will be used as follows<br>COD <sub>eff</sub> = 0.08 x COD <sub>w</sub> | COD <sub>eff</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | tonnes |
|  |  | COD <sub>eff</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span>                     | tonnes |

|  |  |  |  |
|--|--|--|--|
| <b>6 METHANE EMISSIONS FROM WASTEWATER</b> | Emissions resulting from primary and secondary wastewater treatment (ie. from the "liquid train") are calculated as follows:<br>CH <sub>4</sub> gen <sub>ww</sub> = (COD <sub>w</sub> - COD <sub>sl</sub> - COD <sub>eff</sub> ) x MCF <sub>ww</sub> x EF <sub>w</sub> tonnes CO <sub>2</sub> -e |  | CH <sub>4</sub> gen <sub>ww</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span> t CO <sub>2</sub> -e |
|--|--|--|--|

where EF<sub>w</sub> = 5.3 tonnes CO<sub>2</sub>-e per tonne COD and MCF<sub>ww</sub> is shown at step 3  
and the quantity of COD removed as sludge (COD<sub>sl</sub>) from wastewater is obtained from step 8 below

| EMISSIONS FROM TREATMENT OF SLUDGE                          |  | Input  | Result |
|---|--|--|--------|
| 7 Sludge Treatment  | For type of sludge treatment - select the methane correction factor from Table G   | MCF <sub>sl</sub> = <span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  |        |
| 8 Volatile solids or COD in sludge treatment process        | Insert the quantity of volatile solids removed as sludge from wastewater and undergoing sludge treatment (if unknown leave blank)<br>Volatile solids in the primary sludge (VS <sub>p</sub> ). See Note d<br>Volatile solids in the waste activated sludge VS <sub>wasl</sub> . See Note e | VS <sub>p</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>VS <sub>wasl</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>    | tonnes |
|   | <b>OR</b> If quantity of volatile solids is unknown, insert quantity of COD removed as sludge from wastewater and treated at the plant (if unknown leave blank)  | COD <sub>sl</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | tonnes |
|   | <b>OR</b> If COD <sub>sl</sub> is unknown, insert fraction of COD <sub>w</sub> removed as sludge from wastewater (if unknown leave blank)<br>Fraction COD removed as sludge (as a decimal eg. 1/3 is 0.33) F <sub>codsl</sub>  | F <sub>codsl</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   |        |
|   | The fraction of COD removed as sludge from wastewater (F <sub>codsl</sub> ) is calculated from the above. However, in the absence of other data, a default of 0.6 will be used for F <sub>codsl</sub>  | F <sub>codsl</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0.60</span>  |        |
|   | Quantity of COD in sludge COD <sub>sl</sub> = (VS <sub>p</sub> x 1.99 + VS <sub>wasl</sub> x 1.48) <b>OR</b> F <sub>codsl</sub> x COD <sub>w</sub>   | COD <sub>sl</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span>  | tonnes |
| 9 Sludge transferred out to landfill or other than landfill | Insert the quantity of volatile solids in sludge transferred after treatment to landfill or other than landfill (if unknown leave blank)<br>Volatile solids in sludge transferred to landfill<br>Volatile solids in sludge transferred to other than landfill                              | VS <sub>trl</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>VS <sub>stro</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | tonnes |
|   | <b>OR</b> If the volatile solids are unknown, insert the quantity of COD in sludge transferred (if unknown leave blank)<br>COD in sludge transferred to landfill<br>COD in sludge transferred to other than landfill   | COD <sub>trl</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>COD <sub>tro</sub> = <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | tonnes |
|   | Quantity of COD in sludge transferred out (COD <sub>tr</sub> = [VS <sub>trl</sub> + VS <sub>stro</sub> ] x 1.48 <b>OR</b> [COD <sub>trl</sub> + COD <sub>tro</sub> ])  | COD <sub>tr</sub> = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span>  | tonnes |

**NOTE:** The default COD<sub>tr</sub> is zero which results in a conservatively high emission value. If no sludge is transferred out in a particular year, but sludge is intermittently removed from a lagoon (eg once every 2 or 3 years), the quantity of COD in the sludge removed should be averaged over the cycle period as a quantity per year and inserted as COD<sub>trl</sub> to obtain a more accurate emission value.

|   |   |  |  |
|---|---|--|--|
| <b>10 METHANE EMISSIONS from SLUDGE TREATMENT</b> | Emissions resulting from <u>sludge treatment</u> (eg anaerobic digestors, lagoons, dewatering etc) are calculated as follows:<br>CH <sub>4</sub> gensl = (COD <sub>sl</sub> - COD <sub>tr</sub> ) x MCF <sub>sl</sub> x EF <sub>sl</sub> in tonnes CO <sub>2</sub> -e |  | CH <sub>4</sub> gensl = <span style="border: 1px solid black; display: inline-block; width: 50px; text-align: center;">0</span> t CO <sub>2</sub> -e |
|---|---|--|--|

where EF<sub>sl</sub> = 5.3 tonnes CO<sub>2</sub>-e per tonne COD and MCF<sub>sl</sub> is shown at step 7

**TOTAL METHANE EMISSIONS**

11 Methane generated Total methane generated from wastewater and from sludge  $CH_4gen = CH_4gen_{ww} + CH_4gen_{sl}$   $CH_4gen =$

12 Methane captured for combustion or flaring Insert volume of methane combusted or flared if applicable  $Q =$   m<sup>3</sup>  
 Insert methane recovered in digester if applicable (in tonnes CO<sub>2</sub>-e)  t CO<sub>2</sub>-e  
 Methane captured  $R = 0.0142464 \times Q$  OR tonnes recovered in digester  $R =$   t CO<sub>2</sub>-e  
 Methane flared or recovered in a digester is subtracted from total emissions

13 TOTAL METHANE EMISSIONS Total methane emissions =  $CH_4gen - R$  Total Methane Emissions  $CH_4gen - R =$   t CO<sub>2</sub>-e

**NITROUS OXIDE EMISSIONS**

14 Nitrogen in wastewater (N) Nitrogen entering STW (N<sub>in</sub>) assumed to be =  $0.036 \times 0.16 \times \text{Population}$  (tonnes N)  $N_{in} =$   t N

15 Nitrogen in sludge Dry mass of sludge transferred to landfill (M<sub>trl</sub>)  
 Insert M<sub>trl</sub> (if known). Else leave blank  $M_{trl} =$   tonnes  
 Nitrogen in sludge transferred to landfill (N<sub>trl</sub>) =  $0.05 \times M_{trl}$ , default =  $0.05 \times COD_{sl}$   $N_{trl} =$   t N  
 Nitrogen in sludge transferred to other than landfill (N<sub>tro</sub>) assumed to be zero  $N_{tro} =$   t N  
 Nitrogen in sludge  $N_{sl} = N_{trl} + N_{tro}$   $N_{sl} =$   t N

16 Nitrogen in effluent discharged to the environment ( $N_{out} = N_{encw} + N_{estw} + N_{cww}$ )  
 % effluent discharged to enclosed waters  %  $N_{encw} =$   t N  
 (ie. all waters other than estuarine or open coastal waters. Default is 100%)  
 % effluent discharged to estuarine waters  %  $N_{estw} =$   t N  
 % effluent discharged to open coastal waters  %  $N_{cww} =$   t N  
 Note that for most NSW utilities 100% of effluent will be discharged to enclosed wa  $N_{out} =$   t N

17 TOTAL NITROUS OXIDE EMISSIONS  $E_j = (N_{in} - N_{sl} - N_{out}) \times 4.9 + N_{encw} \times 4.9 + N_{estw} \times 1.2 + N_{cww} \times 0$  tonnes CO<sub>2</sub>-e  $E_j =$   t CO<sub>2</sub>-e

**18 TOTAL GREENHOUSE GAS EMISSIONS FROM STW**

Total GHG Emissions = Methane emissions plus Nitrous oxide emissions  $CH_4gen - R + E_j =$   t CO<sub>2</sub>-e

**NOTES:**

- Calculation of emissions from STWs requires estimation or measurement of various parameters including BOD or COD for inflow and outflow.
- The greenhouse gas emissions can be calculated using the NGER System Measurement Technical Guidelines (NGER Guidelines). The NGER Guidelines are available on the Department of the Environment website.
- The calculations above include a number of simplifying assumptions which have been based on typical STW operations shown at yellow tab **STW Assumptions**. However, where these assumptions are incorrect, they can be overridden as necessary.
- Primary sludge is from the first major treatment process in a STW that removes a substantial amount of suspended matter and no colloidal or dissolved matter.
- Waste activated sludge is from a secondary treatment process in a STW involving aeration and active biological material.
- Graphs have also been prepared based on typical STW operations for different inflows and populations. These are shown at orange tab **STW Graphs**.
- Table of default Methane Correction Factors for different types of treatment is shown below. See also yellow tab **STW Assumptions**

**TABLE G - METHANE CORRECTION FACTORS (MCF)**

| TREATMENT METHOD                    | Type of STW for each treatment method   | MCF Values |
|-------------------------------------|---|------------|
| Managed aerobic treatment           | <ul style="list-style-type: none"> <li>Preliminary treatment (i.e. screens and grit removal)</li> <li>Primary sedimentation tanks (PST)</li> <li>Activated sludge processes, including anaerobic fermentation zones and anoxic zones for biological nutrient removal (BNR)</li> <li>Secondary sedimentation tanks or clarifiers</li> <li>Intermittently decanted extended aeration (IDEA), intermittently decanted aerated lagoons (IDAL) and sequencing batch reactors (SBR)</li> <li>Oxidation ditches and carousels</li> <li>Membrane bioreactors (MBR)</li> <li>Mechanically aerated lagoons</li> <li>Trickling filters</li> <li>Dissolved air flotation</li> <li>Aerobic digesters</li> <li>Tertiary filtration</li> <li>Disinfection processes (e.g. chlorination inc. contact tanks, ultraviolet, ozonation)</li> <li>Mechanical dewatering (e.g. centrifuges, belt filter presses)</li> </ul> | 0          |
| Unmanaged aerobic treatment         | <ul style="list-style-type: none"> <li>Gravity thickeners</li> <li>Imhoff Tanks</li> </ul>  | 0.3        |
| Anaerobic digester/reactor          | <ul style="list-style-type: none"> <li>Anaerobic digester</li> <li>High rate anaerobic reactors</li> </ul>  | 0.8        |
| Anaerobic shallow lagoon (<2m deep) | <ul style="list-style-type: none"> <li>Facultative lagoons</li> <li>Maturation/polishing lagoons</li> <li>Sludge drying pans</li> </ul>   | 0.2        |
| Anaerobic deep lagoon (>2m deep)    | <ul style="list-style-type: none"> <li>Sludge lagoons</li> <li>Covered anaerobic lagoons</li> </ul>   | 0.8        |

Graphs of Emissions from different types of STW

Greenhouse gas emissions for typical types of treatment are graphed below against population and inflow. The graphs have been developed on the assumption that average dry weather flow from residential sewage is 200 L per capita per day and that the types of treatment correspond to the default fractions anaerobic shown in yellow tab **STW Assumptions**. Refer also to the other assumptions shown at yellow tab **STW Assumptions**.

Figure 1. Greenhouse Gases for Various STW Types - Based on Population

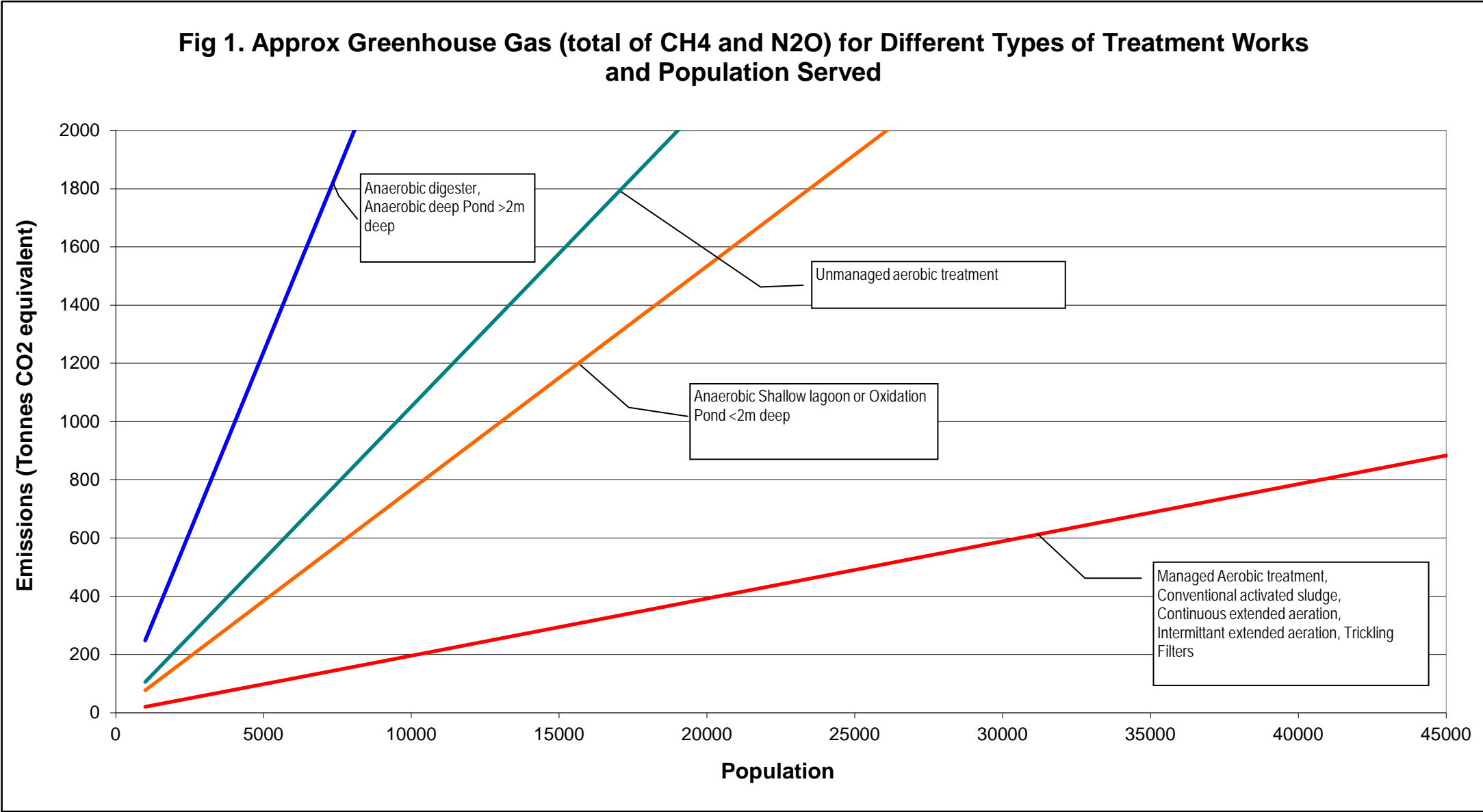
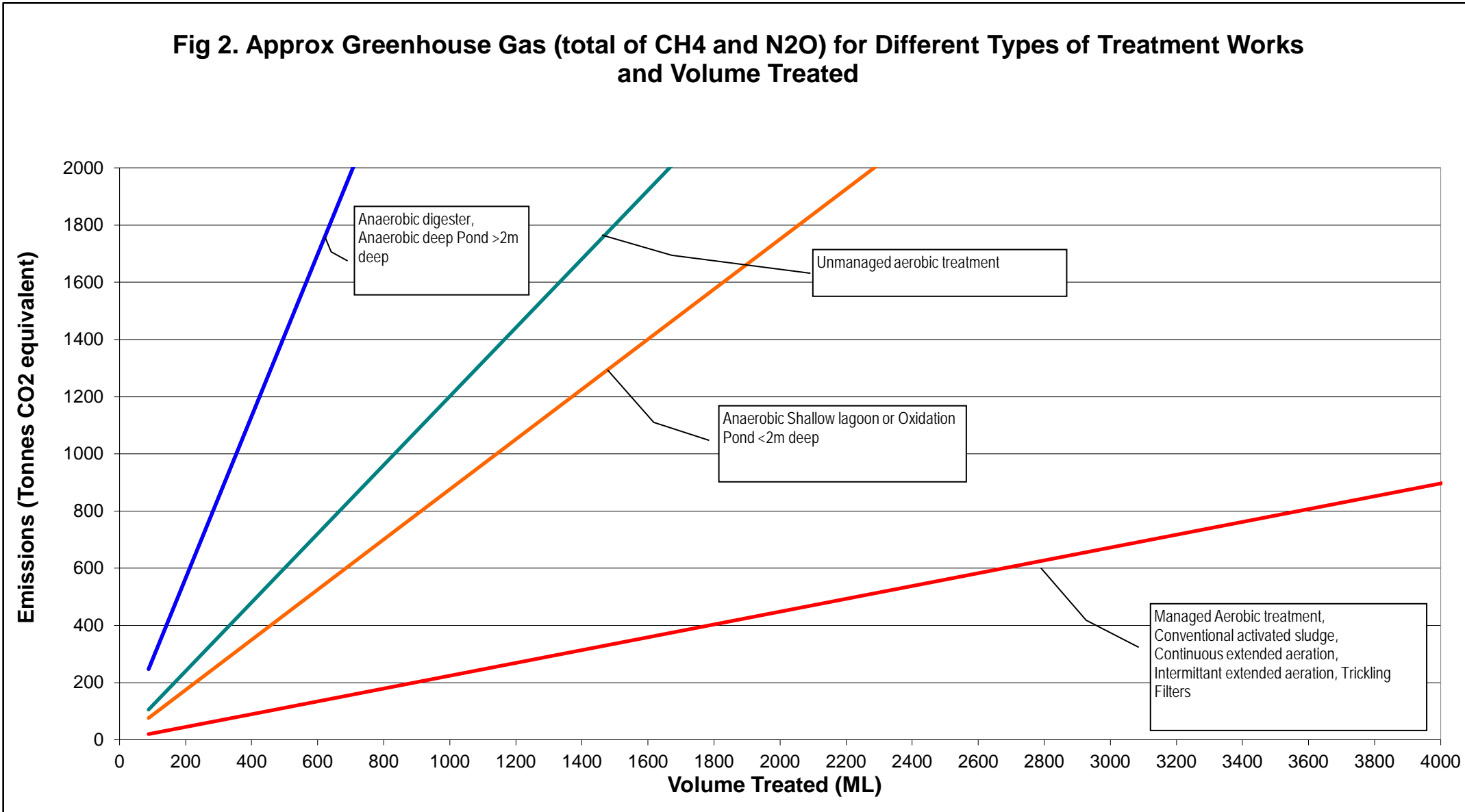


Figure 2. Greenhouse Gases for Various STW Types - Based on Volume of Inflow





Assumptions Adopted for the Calculation of Emissions from STWs

The following assumptions have been provided to assist in the calculation of emissions from STWs. Using these assumptions will enable a first approximation of greenhouse gas emissions. Where utilities have data available for quantities of BOD/COD in the treatment process, the assumptions below may not apply. Waste water treatment is a multi stage process in which the emissions from each stage can be separately calculated . This calculator assumes two stages, a waste water treatment stage and a sludge treatment stage. The emissions from each stage must be added to determine the total emissions. For example, treatment plants with sludge lagoons are calculated in two stages which are added together to determine the emissions. In general, formulae and factors shown below have been adopted from the "National Greenhouse And Energy System Measurement Technical Guidelines"

- (a)

COD in influent to STW (CODw)

BOD from domestic sewage is assumed to be 2.25 tonnes per annum per 100 persons  
COD is assumed to be 2.6 times BOD  
COD = 2.6 x 2.25 / 100 = 0.0585 tonnes per capita

COD in influent to the STW (CODw) can therefore be calculated from  
CODw = 0.0585 x population
- (b)

Population served

Where the inflow to the STW is known but the population served is unknown, an approximation for the population served can be calculated from the assumption that the average dry weather flow (ADWF) for residential sewage is 200 L per capita per day.
- (c)

Quantity of COD removed as sludge from wastewater and undergoing sludge treatment (CODsl)

CODsl = CODpsl + CODwasl  
where CODpsl is the quantity of COD removed as primary sludge from wastewater and undergoing sludge treatment and CODwasl is the quantity COD removed as waste activated sludge  
CODpsl = VSpsl x 1.99  
where VSpsl is the estimated volatile solids in the primary sludge  
CODwasl = VSwasl x 1.48  
where VSwasl is the estimated volatile solids in the waste activated sludge

The fraction of COD removed as sludge should be readily available from internal records of treatment plants.  
In the absence of actual data, it is assumed that the COD removed as sludge (CODsl) is about 60% of COD influent to the STW  
CODsl = 0.6 x CODw unless a better estimate is available from the estimated volatile solids.
- (d)

COD in effluent discharged from the STW (CODEff)

COD in effluent discharged from the STW is assumed to be  
CODEff = 0.08 x CODw If CODEff is known, the actual value should be inserted to override this assumption
- (e)

Methane emission factor for wastewater (EFw) and for sludge (EFsl)

Default emission factor for wastewater and for sludge is  
EFw = EFsl = 5.3 tonnes CO2-e / tonne COD
- (f)

Methane Correction Factor (Fraction of COD anaerobically treated in wastewater (MCFww) and in sludge (MCFsl))

Methane correction factors (MCF) for different types of treatment are provided in the NGER Guidelines and are shown in the table below.  
The type of STWs corresponding to each type of treatment are also shown in the table below
- (g)

Methane captured for combustion or flaring

Methane captured = 0.0142464 x Q in tonnes CO2-e (where Q is the volume in m3 of methane combusted, flared or transferred out)
- (h)

Methane emissions generated from wastewater treatment are calculated using the formula shown in the NGER Guidelines  
CH4genww = (CODw - CODsl - CODEff) x MCFww x EFw in tonnes CO2-e  
Using default values, this results in:  
CH4genww = (CODw x 0.63) x MCFww x 5.3 in tonnes CO2-e
- (i)

Methane emissions generated from sludge treatment are calculated using the formula shown in the NGER Guidelines  
CH4gensl = (CODsl - CODtrl - COD tro) x MCFsl x EFsl in tonnes CO2-e  
Where sludge is transferred to landfill or other than landfill on an intermittent basis (eg every 2 or 3 years), an approximation of the emissions can be obtained by assuming an average yearly transfer (otherwise in some years the calculated emissions would be negative).  
The default CODtro and CODtrl is zero which results in a conservative (high) emissions value if the COD transferred out is not taken into account.
- (j)

The total methane emissions are the sum of the wastewater emissions plus sludge emissions less the methane captured  
Total Methane Emissions = CH4genww + CH4gensl - methane captured in tonnes CO2-e

(k)

Nitrogen entering the plant is assumed to be

$$N_{in} = Protein \times Fracpr \times Population$$

where

Protein = 0.036 (default from NGER Guidelines)

Fracpr = 0.16 (default from NGER Guidelines)

(l)

Nitrogen in sludge transferred to landfill is assumed to be 0.05 times the dry mass of sludge transferred to landfill

$$N_{trl} = 0.05 \times M_{trl}$$

where  $M_{trl}$  is the dry mass of sludge transferred to landfill (default assumed to be CODsl)

Nitrogen in sludge transferred to other than landfill is assumed to be zero

$$N_{tro} = 0$$

(m)

Nitrogen in effluent is assumed to be that remaining in effluent after sludge has been removed

$$N_{out} = N_{in} - N_{trl} - N_{tro}$$

(n)

Nitrous oxide emissions ( $E_j$ ) are calculated using the formula shown in the NGER Guidelines

$$E_j = (N_{in} - N_{trl} - N_{tro} - N_{out}) \times EF_{secij} + N_{out} \times EF_{disij}$$

where  $EF_{secij}$  is the emission factor for wastewater treatment with default value of 4.9 tonnes  $N_2O$  measured in  $CO_2$ -e per tonne nitrogen and  $EF_{disij}$  is the emission factor for the discharge environments shown below in  $CO_2$ -e per tonne nitrogen

|  | $EF_{disij}$ |
|--|--------------|
| Discharge to enclosed waters<br>(ie. all waters other than estuarine or open coastal waters) | 4.9          |
| Discharge to estuarine waters  | 1.2          |
| Discharge to open coastal waters   | 0            |

For convenience, based on all of the above assumptions, graphs have been prepared for different types of STWs for different inflows or populations. These graphs are shown at the orange tab **STW Graphs**.

| TYPE OF TREATMENT                   | STW assumed for each type of treatment   | MCF Values |     |
|-------------------------------------|--|------------|-----|
| Managed aerobic treatment           | Preliminary treatment (i.e. screens and grit removal)  | 0          | 0   |
|                                     | Primary sedimentation tanks (PST)  |            |     |
|                                     | Activated sludge processes, including anaerobic fermentation zones and anoxic zones for biological nutrient removal (BNR)                  |            |     |
|                                     | Secondary sedimentation tanks or clarifiers  |            |     |
|                                     | Intermittently decanted extended aeration (IDEA),<br>intermittently decanted aerated lagoons (IDAL) and<br>sequencing batch reactors (SBR) |            |     |
|                                     | Oxidation ditches and carrousels   |            |     |
|                                     | Membrane bioreactors (MBR)   |            |     |
|                                     | Mechanically aerated lagoons   |            |     |
|                                     | Trickling filters  |            |     |
|                                     | Dissolved air flotation  |            |     |
|                                     | Aerobic digesters  |            |     |
|                                     | Tertiary filtration  |            |     |
|                                     | Disinfection processes (e.g. chlorination inc. contact tanks,<br>ultraviolet, ozonation)   |            |     |
|                                     | Mechanical dewatering (e.g. centrifuges, belt filter presses)  |            |     |
| Unmanaged aerobic treatment         | Gravity thickeners   | 0.3        | 0.3 |
|                                     | Imhoff Tanks   |            |     |
| Anaerobic digester/reactor          | Anaerobic digester   | 0.8        | 0.8 |
|                                     | High rate anaerobic reactors   |            |     |
| Anaerobic shallow lagoon (<2m deep) | Facultative lagoons  | 0.2        | 0.2 |
|                                     | Maturation/polishing lagoons   |            |     |
|                                     | Sludge drying pans   |            |     |
| Anaerobic deep lagoon (>2m deep)    | Sludge lagoons   | 0.8        | 0.8 |
|                                     | Covered anaerobic lagoons  |            |     |

Example Calculation of Emissions from Water and Sewerage Operations

| Example Calculation of Emissions from Water and Sewerage Operations   |         |         |   |   |   | Example Council            |   |                     |          |                 |     |        |     |
|---|---------|---------|---|---|---|----------------------------|---|---------------------|----------|-----------------|-----|--------|-----|
| <p>For an example council, fictitious fuel quantities have been assumed and are shown in the table at right.</p> <p>These quantities have been entered into the appropriate blue shaded cells in the emissions table below.</p> <p>The council also has an anaerobic lagoon &lt;2m deep.</p> <p>The STW has no biogas captured or flared.</p> <p>Inflow to STW is 430ML serving 5,000 people</p> <p>The total greenhouse gas generated from this STW is shown in the green tab <b>Example STW</b> and is 747 t CO2-e</p> <p>This value is entered into the blue shaded cell for sewerage operations emissions below</p> <p>The total greenhouse gas emissions are shown below as 1262t CO2-e (202t for water supply, 1050t for sewerage and 11t for Other).</p> |         |         |   |   |   | Fuel Type                  |   | Water               |          | Sewerage        |     | Other* |     |
|   |         |         |   |   |   | Electricity                |   | 200000              | kwh      | 300000          | kwh | 100000 | kwh |
|   |         |         |   |   |   | Fuel oil                   |   | 10                  | kL       | 15              | kL  | 15     | kL  |
|   |         |         |   |   |   | Diesel oil                 |   |                     |          |                 |     | 10     | kL  |
|   |         |         |   |   |   | Ethanol                    |   |                     |          |                 |     | 12     | kL  |
|   |         |         |   |   |   | Heating oil                |   |                     |          |                 |     | 5      | kL  |
|   |         |         |   |   |   | Diesel oil (non transport) |   |                     |          |                 |     | 2      | kL  |
|   |         |         |   |   |   | Fuel oil (non transport)   |   |                     |          |                 |     | 1      | kL  |
|   |         |         |   |   |   | Wood (dry)                 |   |                     |          |                 |     | 55     | t   |
|   |         |         |   |   |   | Town gas                   |   | 125                 | m3       | 335             | m3  | 540    | m3  |
| Carbon offset   |         |         |   |   |   | 45                         | t   |                     |          |                 |     |        |     |
| FUEL or PROCESS UTILISED  |         | UNITS   | ANNUAL QUANTITY USED  |   |   |                            | GREENHOUSE GAS EMISSIONS (t CO2-equivalent) |                     |          |                 |     |        |     |
|   |         |         | WATER SUPPLY OPERATIONS                                     | SEWERAGE OPERATIONS                                 | OTHER*  | TOTAL USED                 | WATER SUPPLY OPERATIONS                     | SEWERAGE OPERATIONS | OTHER*   | TOTAL EMISSIONS |     |        |     |
|   |         |         | Water source, storage, treatment, transfer and distribution | Sewage collection, storage, treatment and discharge | Transport (vehicles), office buildings, sequestration |                            | t CO2 -e                                    | t CO2 -e            | t CO2 -e | t CO2 -e        |     |        |     |
| ELECTRICITY PURCHASED FROM GRID (Table 5 of NGA)  |         |         | Enter data into the blue cells only                         |   |   |                            |   |                     |          |                 |     |        |     |
| Electricity purchased from NSW or ACT Grid  | kWh     | 200,000 | 300,000   | 100,000   | 600,000   | 172.0                      | 258.0                                       | 86.0                | 516.0    |                 |     |        |     |
| Electricity purchased from QLD Grid   | kWh     |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Electricity purchased from Vic Grid   | kWh     |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   | 172.0                      | 258.0                                       | 86.0                | 516.0    |                 |     |        |     |
| LIQUID FUELS (Transport) (Adapted from Table 4 of NGA)  |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Gasoline for use in an aircraft (AVGAS)   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Kerosene for use in an aircraft (AVTUR)   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Fuel oil (General transport)  | kL      | 10      | 15  | 15  | 40  | 29.2                       | 43.8  | 43.8                | 116.8    |                 |     |        |     |
| Biodiesel (General transport)   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Gasoline (Vehicles)   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Diesel oil (Vehicles)   | kL      |         |   | 10  | 10  |                            |   | 27.0                | 27.0     |                 |     |        |     |
| Liquefied petroleum gas (Vehicles)  | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Ethanol (Vehicles)  | kL      |         |   | 12  | 12  |                            |   | 1.0                 | 1.0      |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   | 29.2                       | 43.8  | 71.7                | 144.7    |                 |     |        |     |
| LIQUID FUELS (Non Transport) (Adapted from Table 3 of NGA)  |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Petroleum based oils (other than fuel, eg lubricants)   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Gasoline (other than for use in an aircraft)  | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Kerosene (other than for use in an aircraft)  | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Heating oil   | kL      |         |   | 5   | 5   |                            |   | 12.9                | 12.9     |                 |     |        |     |
| Diesel oil  | kL      |         |   | 2   | 2   |                            |   | 4.0                 | 4.0      |                 |     |        |     |
| Fuel oil  | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Liquefied petroleum gas   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Biodiesel   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Ethanol for use in an internal combustion engine  | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   | 0.0                        | 0.0   | 16.9                | 16.9     |                 |     |        |     |
| SOLID FUELS (Non Transport) (Adapted from Table 1 of NGA)   |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Black coal  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Brown coal  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Coking coal   | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Brown coal briquettes   | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Industrial materials (eg. tyres) derived from fossil fuels  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Municipal materials (non-biomass)   | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Municipal and industrial materials (Biomass)  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Wood (dry)  | t       |         |   | 55  | 55  |                            |   | 1.1                 | 1.1      |                 |     |        |     |
| Wood (Green and air dried)  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Bagasse   | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Charcoal  | t       |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   | 0.0                        | 0.0   | 1.1                 | 1.1      |                 |     |        |     |
| NATURAL GAS (Non Transport) (Adapted from Table 2 of NGA)   |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Coal seam methane   | m³      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Coal mine waste gas   | m³      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Town gas  | m³      | 125     | 335   | 540   | 1000  | 0.3                        | 0.8   | 1.3                 | 2.3      |                 |     |        |     |
| Liquefied natural gas   | kL      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Landfill or sludge biogas (methane only)  | m³      |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   | 0.3                        | 0.8   | 1.3                 | 2.3      |                 |     |        |     |
| SEWAGE TREATMENT (from STW spreadsheet)   |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| From emissions calculated in 'Example STW' spreadsheet  | t       |         |   |   |   |                            | 284.0                                       |                     | 284.0    |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   |                            | 284.0                                       |                     | 284.0    |                 |     |        |     |
| SEQUESTRATION   |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |
| Carbon Offset (enter as a negative value)   | t       |         |   | -45   | -45   |                            |   | -165.2              | -165.2   |                 |     |        |     |
| SUBTOTAL  | t CO2-e |         |   |   |   |                            |   | -165.2              | -165.2   |                 |     |        |     |
| TOTAL EMISSIONS   | t CO2-e |         |   |   |   | 201.5                      | 586.6                                       | 11.9                | 800.0    |                 |     |        |     |
| * OTHER is the estimated water and sewerage component of the fuel used in Councils' office buildings. It also includes sequestration as a carbon offset where appropriate (this is entered as a negative value).  |         |         |   |   |   |                            |   |                     |          |                 |     |        |     |



## Calculation of Greenhouse Gas Emissions from Sewage Treatment Works

### B. CALCULATION OF GREENHOUSE GAS EMISSIONS FROM SEWAGE TREATMENT WORKS (STWs) - 2015

STW 1 **Example STW (Anaerobic lagoon <2m deep) serving 5,000 people**

Trickling filter and oxidation pond

#### INSTRUCTIONS

- To obtain an approximate GHG emission value, insert data in blue cells steps 1 or 2 and 3 and 7. Green cells may be left blank.
- However, if more detailed information is available, insert this data in the relevant green cell. This will provide a more accurate estimate.
- Total emissions are shown at step 18. To calculate emissions for additional STWs, see worksheets **STW 2 to STW 10** (orange tabs).

#### SEWAGE TREATMENT WORKS

|                     |   | Input   | Result           |
|---------------------|---|---|------------------|
| 1 Inflow to STW     | Insert volume of sewage entering STW per year (if known)<br><b>OR</b>   | Volume influent = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | <b>365</b> ML    |
| 2 Population served | Insert actual population served by STW (if inflow is known, this may be left blank)<br>(If population is unknown, it is approximated by assuming ADWF for residential sewage is 200L/cap/d) | Pop served = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>      | <b>5,000</b> No. |

#### EMISSIONS FROM TREATMENT OF WASTEWATER

|  |   |  |                   |
|--|---|--|-------------------|
| 3 Type of Treatment  | For wastewater treatment - select methane correction factor from Table G below  | MCF <sub>ww</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | <b>0.0</b>        |
| 4 COD in influent  | Insert quantity of COD in influent wastewater (if unknown leave blank)<br>(If BOD in influent is known, COD in influent can be calculated from BOD x 2.6) | COD <sub>w</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   | tonnes            |
| <b>OR</b> If COD in influent is unknown, it is approximated by using a default of 0.0585 tonnes/capita           |   | COD <sub>w</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   | <b>293</b> tonnes |
| 5 COD in effluent  | Insert quantity of COD in effluent leaving the STW (if unknown leave blank)<br>(If BOD in effluent is known, COD can be calculated from BOD x 2.6)        | COD <sub>eff</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | tonnes            |
| If COD in effluent is unknown, a default will be used as follows<br>COD <sub>eff</sub> = 0.08 x COD <sub>w</sub> |   | COD <sub>eff</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | <b>23</b> tonnes  |

|  |  |   |                               |
|--|--|---|-------------------------------|
| <b>6 METHANE EMISSIONS FROM WASTEWATER</b> | Emissions resulting from primary and secondary wastewater treatment (ie. from the "liquid train") are calculated as follows:<br>CH <sub>4</sub> gen <sub>ww</sub> = (COD <sub>w</sub> - COD <sub>sl</sub> - COD <sub>eff</sub> ) x MCF <sub>ww</sub> x EF <sub>w</sub> tonnes CO <sub>2</sub> -e | CH <sub>4</sub> gen <sub>ww</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | <b>0</b> t CO <sub>2</sub> -e |
|--|--|---|-------------------------------|

where EF<sub>w</sub> = 5.3 tonnes CO<sub>2</sub>-e per tonne COD and MCF<sub>ww</sub> is shown at step 3  
and the quantity of COD removed as sludge (COD<sub>sl</sub>) from wastewater is obtained from step 8 below

#### EMISSIONS FROM TREATMENT OF SLUDGE

|  |  |  |                   |
|--|--|--|-------------------|
| 7 Sludge Treatment   | For type of sludge treatment - select the methane correction factor from Table G   | MCF <sub>sl</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | <b>0.2</b>        |
| 8 Volatile solids or COD in sludge treatment process   | Insert the quantity of volatile solids removed as sludge from wastewater and undergoing sludge treatment (if unknown leave blank)<br>Volatile solids in the primary sludge (VS <sub>p</sub> ). See Note d<br>Volatile solids in the waste activated sludge VS <sub>wasl</sub> . See Note e | VS <sub>p</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>VS <sub>wasl</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>    | tonnes            |
| <b>OR</b> If quantity of volatile solids is unknown, insert quantity of COD removed as sludge from wastewater and treated at the plant (if unknown leave blank)  |  | COD <sub>sl</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | tonnes            |
| <b>OR</b> If COD <sub>sl</sub> is unknown, insert fraction of COD <sub>w</sub> removed as sludge from wastewater (if unknown leave blank)<br>Fraction COD removed as sludge (as a decimal eg. 1/3 is 0.33)           |  | F <sub>codsl</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   |                   |
| The fraction of COD removed as sludge from wastewater (F <sub>codsl</sub> ) is calculated from the above. However, in the absence of other data, a default of 0.6 will be used for F <sub>codsl</sub>                |  | F <sub>codsl</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>   | <b>0.60</b>       |
| Quantity of COD in sludge COD <sub>sl</sub> = (VS <sub>p</sub> x 1.99 + VS <sub>wasl</sub> x 1.48) <b>OR</b> F <sub>codsl</sub> x COD <sub>w</sub>   |  | COD <sub>sl</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | <b>176</b> tonnes |
| 9 Sludge transferred out to landfill or other than landfill  | Insert the quantity of volatile solids in sludge transferred after treatment to landfill or other than landfill (if unknown leave blank)<br>Volatile solids in sludge transferred to landfill<br>Volatile solids in sludge transferred to other than landfill                              | VS <sub>trl</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>VS <sub>stro</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | tonnes            |
| <b>OR</b> If the volatile solids are unknown, insert the quantity of COD in sludge transferred (if unknown leave blank)<br>COD in sludge transferred to landfill<br>COD in sludge transferred to other than landfill |  | COD <sub>trl</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span><br>COD <sub>tro</sub> = <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | tonnes            |
| Quantity of COD in sludge transferred out (COD <sub>tr</sub> = [VS <sub>trl</sub> + VS <sub>stro</sub> ] x 1.48 <b>OR</b> [COD <sub>trl</sub> + COD <sub>tro</sub> ])  |  | COD <sub>tr</sub> = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span>  | <b>0</b> tonnes   |

**NOTE:** The default COD<sub>tr</sub> is zero which results in a conservatively high emission value. If no sludge is transferred out in a particular year, but sludge is intermittently removed from a lagoon (eg once every 2 or 3 years), the quantity of COD in the sludge removed should be averaged over the cycle period as a quantity per year and inserted as COD<sub>trl</sub> to obtain a more accurate emission value.

|   |   |   |                                 |
|---|---|---|---------------------------------|
| <b>10 METHANE EMISSIONS from SLUDGE TREATMENT</b> | Emissions resulting from <u>sludge treatment</u> (eg anaerobic digestors, lagoons, dewatering etc) are calculated as follows:<br>CH <sub>4</sub> gensl = (COD <sub>sl</sub> - COD <sub>tr</sub> ) x MCF <sub>sl</sub> x EF <sub>sl</sub> in tonnes CO <sub>2</sub> -e | CH <sub>4</sub> gensl = <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 50px; height: 15px;"></span> | <b>186</b> t CO <sub>2</sub> -e |
|---|---|---|---------------------------------|

where EF<sub>sl</sub> = 5.3 tonnes CO<sub>2</sub>-e per tonne COD and MCF<sub>sl</sub> is shown at step 7

**TOTAL METHANE EMISSIONS**

|  |   |             |                               |
|--|---|-------------|-------------------------------|
| <b>11 Methane generated</b>                          | Total methane generated from wastewater and from sludge $CH_4gen = CH_4gen_{ww} + CH_4gen_{sl}$ | $CH_4gen =$ | <b>186</b>                    |
| <b>12 Methane captured for combustion or flaring</b> | Insert volume of methane combusted or flared if applicable                                      | $Q =$       | <b>0</b> m <sup>3</sup>       |
|  | Insert methane recovered in digester if applicable (in tonnes CO <sub>2</sub> -e)               |             | <b>0</b> t CO <sub>2</sub> -e |
|  | Methane captured $R = 0.0142464 \times Q$ OR tonnes recovered in digester                       | $R =$       | <b>0</b> t CO <sub>2</sub> -e |
|  | Methane flared or recovered in a digester is subtracted from total emissions                    |             |                               |

|                                   |   |   |                                 |
|-----------------------------------|---|---|---------------------------------|
| <b>13 TOTAL METHANE EMISSIONS</b> | Total methane emissions = $CH_4gen - R$ | Total Methane Emissions $CH_4gen - R =$ | <b>186</b> t CO <sub>2</sub> -e |
|-----------------------------------|---|---|---------------------------------|

**NITROUS OXIDE EMISSIONS**

|   |   |              |                              |
|---|---|--------------|------------------------------|
| <b>14 Nitrogen in wastewater (N)</b>  | Nitrogen entering STW ( $N_{in}$ ) assumed to be = $0.036 \times 0.16 \times \text{Population}$ (tonnes N)          | $N_{in} =$   | <b>29</b> t N                |
| <b>15 Nitrogen in sludge</b>  | Dry mass of sludge transferred to landfill ( $M_{trl}$ )  | $M_{trl} =$  | <b>0</b> tonnes              |
|   | Insert $M_{trl}$ (if known). Else leave blank   |              |                              |
|   | Nitrogen in sludge transferred to landfill ( $N_{trl}$ ) = $0.05 \times M_{trl}$ , default = $0.05 \times COD_{sl}$ | $N_{trl} =$  | <b>8.8</b> t N               |
|   | Nitrogen in sludge transferred to other than landfill ( $N_{tro}$ ) assumed to be zero                              | $N_{tro} =$  | <b>0</b> t N                 |
|   | Nitrogen in sludge $N_{sl} = N_{trl} + N_{tro}$   | $N_{sl} =$   | <b>8.8</b> t N               |
| <b>16 Nitrogen in effluent discharged to the environment (<math>N_{out} = N_{encw} + N_{estw} + N_{ocw}</math>)</b> | % effluent discharged to enclosed waters  | <b>100</b> % | $N_{encw} =$ <b>20.0</b> t N |
|   | (ie. all waters other than estuarine or open coastal waters. Default is 100%)                                       |              |                              |
|   | % effluent discharged to estuarine waters   | <b>0</b> %   | $N_{estw} =$ <b>0.0</b> t N  |
|   | % effluent discharged to open coastal waters  | <b>0</b> %   | $N_{ocw} =$ <b>0.0</b> t N   |
|   | Note that for most NSW utilities 100% of effluent will be discharged to enclosed wa                                 | $N_{out} =$  | <b>20.0</b> t N              |

|   |   |         |                                |
|---|---|---------|--------------------------------|
| <b>17 TOTAL NITROUS OXIDE EMISSIONS</b> | $E_j = (N_{in} - N_{sl} - N_{out}) \times 4.9 + N_{encw} \times 4.9 + N_{estw} \times 1.2 + N_{ocw} \times 0$ tonnes CO <sub>2</sub> -e | $E_j =$ | <b>98</b> t CO <sub>2</sub> -e |
|---|---|---------|--------------------------------|

**18 TOTAL GREENHOUSE GAS EMISSIONS FROM STW**

|  |                       |                                 |
|--|-----------------------|---------------------------------|
| Total GHG Emissions = Methane emissions plus Nitrous oxide emissions | $CH_4gen - R + E_j =$ | <b>284</b> t CO <sub>2</sub> -e |
|--|-----------------------|---------------------------------|

**NOTES:**

- Calculation of emissions from STWs requires estimation or measurement of various parameters including BOD or COD for inflow and outflow.
- The greenhouse gas emissions can be calculated using the NGER System Measurement Technical Guidelines (NGER Guidelines). The NGER Guidelines are available on the Department of the Environment website.
- The calculations above include a number of simplifying assumptions which have been based on typical STW operations shown at yellow tab **STW Assumptions**. However, where these assumptions are incorrect, they can be overridden as necessary.
- Primary sludge is from the first major treatment process in a STW that removes a substantial amount of suspended matter and no colloidal or dissolved matter.
- Waste activated sludge is from a secondary treatment process in a STW involving aeration and active biological material.
- Graphs have also been prepared based on typical STW operations for different inflows and populations. These are shown at orange tab **STW Graphs**.
- Table of default Methane Correction Factors for different types of treatment is shown below. See also yellow tab **STW Assumptions**

**TABLE G - METHANE CORRECTION FACTORS (MCF)**

| TREATMENT METHOD                    | Type of STW for each treatment method   | MCF Values |
|-------------------------------------|---|------------|
| Managed aerobic treatment           | <ul style="list-style-type: none"> <li>Preliminary treatment (i.e. screens and grit removal)</li> <li>Primary sedimentation tanks (PST)</li> <li>Activated sludge processes, including anaerobic fermentation zones and anoxic zones for biological nutrient removal (BNR)</li> <li>Secondary sedimentation tanks or clarifiers</li> <li>Intermittently decanted extended aeration (IDEA), intermittently decanted aerated lagoons (IDAL) and sequencing batch reactors (SBR)</li> <li>Oxidation ditches and carousels</li> <li>Membrane bioreactors (MBR)</li> <li>Mechanically aerated lagoons</li> <li>Trickling filters</li> <li>Dissolved air flotation</li> <li>Aerobic digesters</li> <li>Tertiary filtration</li> <li>Disinfection processes (e.g. chlorination inc. contact tanks, ultraviolet, ozonation)</li> <li>Mechanical dewatering (e.g. centrifuges, belt filter presses)</li> </ul> | 0          |
| Unmanaged aerobic treatment         | <ul style="list-style-type: none"> <li>Gravity thickeners</li> <li>Imhoff Tanks</li> </ul>  | 0.3        |
| Anaerobic digester/reactor          | <ul style="list-style-type: none"> <li>Anaerobic digester</li> <li>High rate anaerobic reactors</li> </ul>  | 0.8        |
| Anaerobic shallow lagoon (<2m deep) | <ul style="list-style-type: none"> <li>Facultative lagoons</li> <li>Maturation/polishing lagoons</li> <li>Sludge drying pans</li> </ul>   | 0.2        |
| Anaerobic deep lagoon (>2m deep)    | <ul style="list-style-type: none"> <li>Sludge lagoons</li> <li>Covered anaerobic lagoons</li> </ul>   | 0.8        |

## Examples of Common Emission Sources in Water Supply and Sewerage

| Examples of Common Emission Sources in Water Supply and Sewerage |   |   |   |
|--|---|---|---|
| SOURCE   | WATER SUPPLY OPERATIONS   | SEWERAGE OPERATIONS   | OTHER*  |
| ELECTRICITY PURCHASED FROM GRID<br>(Table 5 of NGA)              | Electricity used during water sourcing, treatment, distribution and transfer.   | Electricity used during sewage collection, storage, treatment and discharge.              | Electricity used in office buildings for both Water and Sewerage Operations.  |
| LIQUID FUELS (Transport)<br>(Table 4 of NGA)                     | N/A   | N/A   | Transport - vehicles owned & used by utility AND registered for road use.   |
| LIQUID FUELS (Non Transport)<br>(Table 3 of NGA)                 | Liquid fuels used for water supply operations other than transport vehicles   | Liquid fuels used for sewerage operations other than transport vehicles                   | Fuels used for heating, hot water, etc in office buildings.<br>Transport - vehicles owned by utility but NOT registered for road use. |
| SOLID FUELS (Non Transport)<br>(Table 1 of NGA)                  | N/A   | N/A   | Wood/coins used for heating, etc in office buildings.   |
| NATURAL GAS (Non Transport)<br>(Table 2 of NGA)                  | Natural gas used for water supply operations other than in office buildings   | Natural gas used for sewerage operations other than in office buildings                   | Natural gas used for heating, hot water, etc in office buildings.   |
| WASTEWATER TREATMENT   | N/A   | Emissions from wastewater treatment (methane and nitrous oxide)<br>See instructions sheet | N/A   |
| SEQUESTRATION  | N/A   | N/A   | <u>Accredited</u> Carbon offsets<br>e.g. tree plantations   |
| EXCLUDED (SCOPE 3)   | Disposal of waste generated.<br>Employee business travel.<br>Employees commuting to/from work.<br>Out-sourced activities (transport/vehicles not owned by utility).<br>Transportation of products, materials and waste. |   |   |



# APPENDIX H: DATA VALIDATION PROCESSES FOR THE NSW PERFORMANCE MONITORING SYSTEM

## H1 Introduction

The *NSW Performance Monitoring System* (page 3) is a ‘one stop shop’ which minimises red tape, avoids duplication in reporting and enables DPI Water to annually provide the required local water utility (LWU) data to the Australian Bureau of Meteorology (BOM - for the annual National Performance Report for Urban Water Utilities ([www.bom.gov.au](http://www.bom.gov.au))) and the Australian Bureau of Statistics.

A prime objective of the *NSW Performance Monitoring System* is to reliably determine the statewide performance of the regional NSW local water utilities. This requires analysis of statewide medians and totals for key performance indicators in order to reveal historical trends and enable interstate performance comparisons<sup>47</sup>. A further objective is to publish performance data which is accurate and which is not misleading, both for individual LWUs and for statewide indicators. The achievement of these objectives is contingent on obtaining a full and accurate data set. To this end, DPI Water annually critically reviews all reported data to identify any anomalies or inconsistencies and undertakes actions where appropriate to validate and/or correct such anomalous data. In addition, in order to obtain a fully representative data set for six of the more critical performance indicators, DPI Water adopts the previous year’s reported data for those few LWUs that omitted to report such data for the current year. Such data is shown in italics bold in Tables 3 to 18 (section H3 on page 352).

In addition to the extensive independent auditing of the reported NSW data (page 3 and footnote 48 on page 353), this appendix outlines the data validation processes undertaken by DPI Water to identify and address apparent anomalies in the reported data and to develop a full data set which assures ongoing data reliability for the *NSW Performance Monitoring System*.

DPI Water is responsible for managing implementation of Goal 21 of the State Plan NSW 2021 for regional NSW, the NSW Government’s *Country Towns Water Supply and Sewerage (CTWSS) Program* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), which is a major reform program and the Regional Water and Waste Water Backlog (RWWWB) program. DPI Water oversees and monitors utility performance, provides leadership, guidance, software and training (page 9) to the utilities and is the primary regulator for the 105 regional LWUs.

## H2 Anomalous data

The quality and consistency of data reported by LWUs in the *NSW Performance Monitoring Database* varies significantly. To assist LWUs in reporting their data, the database includes a facility that screens the data and provides an alert to notify the user where data is inconsistent, out of range or incomplete. Most LWUs accurately report their performance data. However, review by DPI Water of the full data set from all LWUs consistently reveals a small but significant percentage of anomalous data. This may arise due to misinterpretation of an indicator definition, due to errors in data handling (input or misreading), due to inconsistencies in the data stream or due to errors/omissions in the data itself.

Data that is inconsistent or anomalous includes:

- **Incomplete data** - data that is not reported or left blank in the current year’s reported data.
- **Inconsistent data** - reported data that is inconsistent with historic values or out of expected range.
- **Errors in data** - reported data that is in error (e.g. text instead of numerals, percentage greater than 100, data where the summation does not agree etc.).
- **Unsubstantiated data** - reported data that is out of expected range with no substantiating evidence (e.g. leakage less than 6% of the total water supplied or a reported number of assessments which differs significantly from historical trends or from that reported in the utility’s Annual Financial Statements).

<sup>47</sup> Refer to page 17 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*, section 5.3 on page 19, Table 4 on page 111 and Appendix A on page 204. Such performance comparisons may provide valuable insights on opportunities for continuing to improve performance and to provide better value for money to residents.

- **Data that conflicts with data from other sources** - reported data that differs significantly from data available elsewhere (e.g. drinking water quality compliance results from NSW Health, data from the LWU's annual financial statements, IWCM Strategies etc.).

Anomalous data must be reviewed and either validated or rejected. The procedures undertaken by DPI Water to validate data are outlined in the following sections.

### H3 Validation of data

DPI Water undertakes various broad screening procedures and follows this up with intensive manual and computerised validation procedures. The criteria used in the validation process for the more critical indicators are shown in section H4 on page 353. Following screening and validation, DPI Water reviews all anomalous reported values and anomalies are either:

- referred to the LWU for confirmation, or
- adjusted where relevant data from other sources is available, or
- rejected and left as blank, or
- adjusted where the reported value is unsubstantiated or does not meet adopted criteria.

In addition, in order to enable reporting of statewide totals and medians for six of the more critical indicators (Total Urban Water Supplied, Operating Cost, Management Cost, Current Replacement Cost, Total Volume of Sewage Collected and Volume of Effluent Recycled), where a LWU has not reported current data, the data reported for the previous year has been adopted and is shown in *italics bold* in Tables 3 to 18 of this Report.

It is noted that the 105 NSW LWUs each report more than 180 water supply indicators and a similar number of sewerage indicators together with their financial indicators (from the LWUs' Annual Financial Statements). Of these indicators, approximately 50 for each of water supply and sewerage are key indicators which are shown on each LWU's annual TBL Performance Report (pages 274 to 277). Of these 50 key indicators, 20 are considered to be critical indicators to determine a LWU's performance and the criteria for validating these critical indicators are described in section H4 on page 353.

Screening and validation procedures identify the more significant anomalies, and anomalies occurring in key indicators will be followed up with the LWU. However, there may be instances where an error is not identified. To allow for this, DPI Water also provides a draft copy of tables of performance indicators to each LWU for its review prior to finalisation of the annual report.

DPI Water procedures for validation and adjustment of selected data are detailed below.

**Incomplete data** - Where a LWU has not reported data, the validation process is as follows:

- For critical indicators, refer to the criteria outlined in section H4.
- For other key indicators, DPI Water will contact the LWU to obtain such data, unless the reported value can be adjusted in accordance with data obtained from an alternative source.
- For less significant indicators, the field will be left blank.

**Inconsistent data** - Where the reported value is inconsistent with historic values, out of expected range or otherwise inconsistent, the validation process is as follows:

- For critical indicators, refer to the criteria outlined in section H4.
- For other key indicators, DPI Water will contact the LWU to review the reported data, unless the reported value can be adjusted in accordance with data obtained from an alternative source.
- For less significant indicators, the reported value will be deleted and the field left blank.

**Errors in data** - Where a reported value is obviously in error (e.g. numbers reported as text, values reported as \$M instead of \$'000 etc.), DPI Water will correct the error. Where there is some doubt, if it is a key indicator the LWU will be requested to review the reported value, otherwise it will be deleted and the field left blank.

**Unsubstantiated data** - Where the reported value is out of the expected range and is unsubstantiated, the validation process is as follows:

- For critical indicators, refer to the criteria outlined in section H4.

- For other key indicators, DPI Water will contact the LWU to review the reported data, unless the reported value can be adjusted in accordance with data obtained from an alternative source.
- For less significant indicators, the reported value will be deleted and the field left blank.

**Data that conflicts with data from other sources** - Where reported data conflicts with data obtained from alternative sources (e.g. the utility's strategic business plan or IWCMS Strategy, NSW Health, Environment Protection Authority, Special Schedules etc.) DPI Water will review the data and will either adjust the data to agree with the alternative source or request confirmation of the data from the LWU.

**Audited data** - The NWI requires an independent audit to be undertaken every 3 years<sup>48</sup> of the water supply and sewerage performance reporting for those LWUs with over 10,000 connected properties. DPI Water approves each LWU's proposed auditor, after confirming that the auditor has met the NWI Auditing Requirements and reviews the audit findings for the non-financial data and requests confirmation or follow up by the LWU's auditor for indicators that fail the audit.

**Financial data** – the financial data is reviewed by DPI Water and any omissions or inconsistencies are referred to the LWU for confirmation. Independent audits are conducted annually for all of the 30 NWI financial performance indicators, which are reported in Notes 2 and 3 of the Special Purpose Financial Statements to each LWU's annual financial statements (refer to pages 253 to 254).

LWUs are required to annually report the fair value<sup>49</sup> and the current replacement cost depreciation of their water supply and sewerage assets in their audited Annual Financial Statements.

## H4 Criteria for adjustment of critical indicators

DPI Water takes care to ensure that the critical indicators are consistent and accurate. The criteria adopted by DPI Water to review and where necessary adjust anomalous data for critical indicators are outlined on pages 353 to 357.

### H4.1 Aggregated businesses

The performance indicators in the NSW Performance Monitoring System are determined for each LWU's aggregated water supply or sewerage businesses rather than for individual water supply or sewerage systems. This is done to align with national performance reporting and to facilitate comparisons. In addition, detailed data showing the performance of each of the 535 LWU water and sewerage treatment works is published in Appendices D1 and D2 on pages 280 to 295. Refer also to Section H4.6 on page 355.

### H4.2 Connected properties

Performance indicators are determined on a 'per connected property' basis for consistency with the National Performance Framework. A **connected property** is a **property that is connected to the water supply or sewerage system**, as opposed to an **assessment**, which is a **bill issued by a water utility**.

**Determination of number of assessments** – The number of assessments is determined from a review of the data reported by the LWU in the NSW Performance Monitoring Database and the number of assessments reported by the LWU in its annual financial statements (Special Schedule Nos 3 and 5) together with the historic data. The number of assessments adopted must be consistent with historic data.

**Calculation of connected properties** – The number of connected properties is calculated as the product of the number of assessments times the ratio of the number of connected properties per assessment for each of water supply and sewerage (Tables 9 and 14 on pages 169 and 189). DPI Water has worked with LWUs to establish these ratios which do not change significantly from year to year.

<sup>48</sup> Independent audits of the auditable indicators in the *National Performance Framework 2013-14* for the 29 LWUs required to report nationally were undertaken in 2006-07, 2009-10 and 2012-13. Indicators which met the rigorous national auditing requirements have been published in the *National Performance Report 2014-15*. These LWUs serve 74% of the connected properties in regional NSW. In addition the reported values for the 30 NWI financial performance indicators have been independently audited annually since 2006-07 for all of the LWUs.

<sup>49</sup> In accordance with the Australian Accounting Standards Board's AASB116 Property Plant and Equipment. The *NSW Reference Rates Manual for Valuation of Water Supply, Sewerage and Stormwater Assets*, DPI Water 2016 provides current unit rates and guidance on the valuation and depreciation of such assets. Available at [www.water.nsw.gov.au](http://www.water.nsw.gov.au).



### H4.3 Charges and bills

**Charges** – water supply and sewerage charges (access charges and usage charges) are shown in Tables 6 and 7 on pages 134 and 146 for a LWU's principal water supply or sewerage system (charges are also shown for the non-potable supply component in dual supply systems). LWUs with multiple residential tariffs (i.e. those with different charges for separate water supply or sewerage systems) are shown in Tables 6A and 7A on pages 137 and 149. The charges shown in Tables 6 and 7 include the charges for the current reporting year (2014-15) and also for the forthcoming year (2015-16) and are obtained by DPI Water from each LWU's website.

**Typical residential bill (TRB)** – the TRB is calculated for each LWU's principal water supply system. The TRB is calculated from the utility's average annual volume of residential water supplied per connected property multiplied by the usage charge and added to the access charge. If the LWU has a dual supply system, the above calculation is repeated to obtain the non-potable water component which is added to the potable component to obtain the total TRB. Refer also to note 5 on page 33.

The current TRB is calculated from the current charges and the current residential water supplied. The TRB for the forthcoming reporting year is estimated from the forthcoming year's charges applied to the current residential water supplied. In the following year, the TRB will be recalculated using the actual volume of residential water supplied in that year. Therefore the current TRB shown in column 8 of Table 6 may differ from the corresponding TRB shown in the previous year's reports.

### H4.4 Urban water supplied

**Total potable urban water supplied** – Where a LWU has not reported its total potable urban water supplied, the data reported for the previous year has been adopted (shown in *italics bold* in the tables).

**Residential water supplied** – Where a LWU has reported residential water use but not commercial or industrial use, the reported residential use has been reduced and a commercial component has been included. Similarly, where a LWU has not reported residential water use, a residential component has been included. The residential component in each case has been calculated on the basis of the statewide average percentage of 58% of the LWU's Total Potable Urban Water Supplied (NWI Indicator W11.1 – refer to column 10 of Table 8 on page 155).

**Real Losses (mostly leakage)** - Where a LWU has reported a real loss of less than 6% of the total potable urban water supplied and has not provided evidence to substantiate such a low value of leakage, the reported real loss has been increased to 6%. In this case, the total potable urban water supplied has also been increased to include the additional leakage component. These adjusted values of real losses are shown in *italics bold* in column 8 of Table 8 on page 155. Refer also to page 15, note 10 on page 34 and Figure 28 on page 66.

**Non Revenue Water (NRW)** (Real losses (mostly leakage), Apparent Losses (under-registration of customer meters and illegal use) plus Unbilled Water supplied (eg. mains flushing and firefighting)) – Where a LWU has reported NRW of less than 10% of the total potable urban water supplied (W11.1), the reported NRW has been increased to 10%, unless the LWU has provided evidence of a Real Loss of less than 6%. In such cases, the adopted value for NRW has been determined as the Real Loss plus 4%. The adjusted values of NRW (W10.1) and total potable urban water supplied (W11.1) are shown in *italics bold* in columns 9 and 10 of Table 8 on page 155. Refer also to note 10 on page 34 and Figure 29 on page 67. NRW for the last 3 years in L/c/d is shown in column 41f of Table 10 on page 172.

### H4.5 Efficiency

**Operating Cost (OMA)** – NWI indicators F11 and F13 (water supply operating cost per property and water and sewerage operating cost per property respectively) are calculated in accordance with the NWI definitions and reported accordingly in the *National Performance Report* and in Appendix F on page 316.

However in Tables 5 and 11 on pages 116 and 180 and Figures 33 to 35 on pages 70 to 72, where a LWU purchases water from a bulk water provider, the operating cost calculated for the LWU excludes the purchase cost of the bulk water but includes an appropriate proportion of the operating cost of the bulk water provider. The cost allocated to the LWU is calculated by multiplying the operating cost of the bulk provider by the ratio of the water purchased by the LWU to the total water supplied by the bulk provider to all customers. This is done in order to provide a 'level playing field' comparison of operating costs by not penalising reticulators through inclusion of the capital cost component of providing the bulk supply, which is included in the purchase price of the water.

Where a LWU has not reported its operating cost, the previous year's operating cost per property has been adopted (shown in italics bold in the tables).

**Management Cost** – Where a LWU has not reported its management cost, the previous year's management cost per property has been adopted (shown in italics bold in the tables).

#### H4.6 Drinking water quality compliance

Drinking Water Quality Compliance for each LWU is based on the number of samples tested as part of the *NSW Health Drinking Water Monitoring Program* supplemented with samples reported by the LWU in the *NSW Performance Monitoring Database*. A LWU has complied with the 2015 NHMRC/NRMMC Australian Drinking Water Guidelines (2015 ADWG) for microbiological water quality (i.e. it is shown as 'Yes' in column (9) of Table 5 on page 116) if the required number of samples has been tested and at least 98%<sup>50</sup> of samples had no E.coli. Where E. coli is detected in a microbiological sample, further investigation is needed to determine whether there is a real problem with drinking water quality in accordance with the NSW Health protocol: (<http://www.health.nsw.gov.au/environment/water/Pages/nswhrp-microbiological.aspx>).

Similarly, chemical water quality (health related<sup>51</sup>) is satisfactory (shown as 'Yes' in column (11) of Table 5 on page 116) if the required number of samples has been tested and the 95th percentile of results does not exceed the guideline value for each chemical. Non-potable supplies are excluded.

Physical (aesthetic) water quality is satisfactory if the required number of samples has been tested and the mean of results does not exceed the guideline value for each characteristic.

Where a LWU has more than one treatment works, the reported compliance has been pro-rated on the basis of the number of samples tested at each treatment works. Where a LWU has not reported the number of samples tested or the compliance of samples from a particular treatment works and no details are available from NSW Health, the percentage of complying samples for that treatment works is deemed to be zero. Refer also to pages 8 and 9.

As noted on page 20, annual review of your Drinking Water Management System (DWMS) is required and any required corrective action needs to be included in your annual Action Plan to Council. Refer also to Circular LWU 18 (page 305).

The physical characteristics tested (aesthetic) are true colour, turbidity, total hardness as CaCO<sub>3</sub>, total dissolved solids (TDS) and pH.

The chemical characteristics tested (health related) are antimony, arsenic, barium, boron, cadmium, chromium, copper, fluoride, lead, manganese, mercury, molybdenum, nickel, nitrate, nitrite, selenium, silver and sulfate. Other chemical characteristics tested which are not health related are aluminium, calcium, chloride, iodine, iron, magnesium, sodium and zinc.

Columns 69, 70 and 71 of Table 12 on page 183 show the percentage of samples which complied with the Physical, Chemical and Microbiological requirements of ADWG for each of the last 3 years. Columns 69a, 70a and 71a show whether the LWU has complied with the 2015 ADWG for physical, chemical and microbiological water quality respectively in the 2014-15 financial year.

Columns 42h, 42j and 42l of Appendix D1 on page 280 show the percentage of the samples tested which complied with the 2015 ADWG for each water treatment works in 2014-15 for physical, chemical and microbiological water quality respectively.

It is important that specialist LWU infrastructure, such as water and sewage treatment works, dams and recycling projects, is fit for purpose, robust, cost-effective and without wasteful **'gold plating'** which penalises residents with an **unwarranted increase** to their typical residential bill (TRB). In this regard, any LWU proposals for the construction or modification of a dam, a water or sewage treatment works or a

<sup>50</sup> This value (98%) has been determined by NSW Health in accordance with section 10.3.1 on page 10-11 of 2015 ADWG and is the same value as applied for the 2004 ADWG.

Where a LWU has not complied with 2015 ADWG, the percentage of samples which complied is shown in columns (9) and (11) of Table 5 on page 116 for microbiological and chemical compliance respectively.

<sup>51</sup> The 2015 ADWG specify guideline limits for chemical water quality (health related). Aesthetic parameters such as iron, aluminium, sodium, total dissolved solids (TDS), chloride, iodine and zinc are excluded.

recycling project require DPI Water approval under section 60 of the Local Government Act, 1993 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Similarly, acceptance of a high or medium risk trade waste discharge to a LWU sewerage system requires a DPI Water Section 90(1) concurrence (page 358).

The section 60 approval involves an independent and objective review which allows DPI Water to share its insights and expertise in overseeing the 535 LWU water and sewage treatment works and 119 LWU dams. The section 60 review provides assurance to the community that the proposed infrastructure is fit for purpose and provides a robust, safe, cost-effective and soundly based solution, without wasteful 'gold plating'. Refer also to pages 106 and 112 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

In addition, under section 61 of the *Local Government Act, 1993*, DPI Water carries out regular inspections of the 535 LWU water and sewage treatment works and provides feedback and mentoring to the LWU operators. Information for each LWU on the DPI Water section 61 reports on the LWU's water and sewage treatment works since 2015 is available in the NSW Performance Monitoring Database (login required). The detailed performance of each of these treatment works is disclosed annually in Appendices D1 and D2 on pages 280 to 295.

Each operator in charge of a water or sewage treatment works in regional NSW is required to have appropriate qualifications and experience ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). DPI Water conducts comprehensive operator training courses for LWU water and sewage treatment works operators ([www.water.nsw.gov.au](http://www.water.nsw.gov.au) and [urbanwater.ctw@dpi.nsw.gov.au](mailto:urbanwater.ctw@dpi.nsw.gov.au) (pages 36 and 360)). The detailed performance of each of these treatment works is publicly disclosed annually in Appendices D1 and D2 on pages 280 to 295.

Similarly, under the Aboriginal Communities Water and Sewerage Program ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)), DPI Water carries out regular inspections of the water and sewerage infrastructure for 60 discrete Aboriginal Communities in NSW. The 2014-15 drinking water quality results for these communities are disclosed in Appendix D3 on page 296.

#### H4.7 Sewerage

**Sewage Collected** – Where a LWU did not report the current year's volume of sewage collected, either the previous year's value or the current year's volume of sewage treated has been adopted, whichever is the larger (shown in *italics bold* in the tables).

**Effluent Recycled** – Where a LWU has not reported a value for effluent recycled but has reported greater than 10% recycling in previous years, the percentage recycled for the current reporting year is assumed to be the same as that for the previous year (shown in *italics bold* in the tables).

**Compliance with Licence for Prescribed Indicators** – LWU Licence limits are generally 90 percentile limits. A LWU is deemed to comply with its licence for each prescribed indicator (i.e. compliance is 100%) if it achieves  $\geq 90\%$  compliance. Where there is no licence limit for a prescribed indicator, compliance is shown as 100%. Where a LWU has not reported the compliance for a sewage treatment works, compliance for that treatment works is deemed to be zero.

**Sewage Treatment Works (STW) Compliance** – A STW is fully compliant if it meets its licence conditions for all prescribed indicators. If any indicator which is prescribed in the licence fails to meet the licence conditions (i.e. BOD, Suspended Solids, Total Nitrogen, Oil and Grease, Phosphorous, Faecal Coliforms, Ammonia, pH), then the STW is deemed not to comply with its licence.

### H5 Implementation of best-practice management framework

As noted on page 5, the NSW *Best-Practice Management (BPM) Framework* (page 6) is a **locally based self-regulation regime**, with strategic oversight of LWU implementation of 19 outcomes required by the framework by DPI Water.

LWUs must implement the 19 planning, pricing and management outcomes required by the BPM framework in order to achieve appropriate, affordable, cost-effective and sustainable piped water supply and sewerage services and to comply with National Competition Policy and with the National Water Initiative. Meeting the outcomes required by the Framework is also a pre-requisite for payment of a dividend from the surplus of the water supply or sewerage businesses to the council's general revenue and is also a pre-requisite for financial assistance towards the capital cost of backlog infrastructure (as at 1996) under the CTWSS Program and the Regional Water and Waste Water Backlog (RWWWB) Program (page 5).



Each LWU reports its implementation of the outcomes required by the *Best-Practice Management Framework* in Notes 2 and 3 of the Special Purpose Financial Statements to its annual financial statements (pages 253 to 254). DPI Water assesses this reported implementation against the 19 required outcomes set out in Table 1 of the *Best-Practice Management Guidelines, 2007* (10 for water supply and 9 for sewerage – refer to pages 6 and 7). The assessment procedure for each required outcome is shown below. Where a LWU has not reported its implementation against one or more of the required outcomes, DPI Water will assess the LWU's implementation from other available data (e.g. annual financial statements, Strategic Business Plans submitted previously and completion of performance reporting via the *NSW Performance Monitoring Database*). Otherwise, the LWU will be deemed not to have implemented that particular required outcome. Each LWU's implementation results are shown in Table 3 on page 108.

Further information on implementation of integrated water cycle management (IWCM), strategic business planning, water conservation, drought management and trade waste regulation is available on pages 21 to 24, 105 and 110 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

A LWU's **peak planning document** for water supply and sewerage is the **later of its IWCM Strategy and financial plan and SBP and financial plan** (page 8).

**Strategic Business Plan and Financial Plan** – The strategic business plan needs to be prepared in accordance with the July 2014 Strategic Business Plan Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Guidance for LWUs is available in the *NSW Water and Sewerage Strategic Business Planning Guidelines*, NSW Office of Water, July 2011 ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Refer also to pages 22, 23, 108 and 113 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

DPI Water reviews LWU strategic business plans and financial plans in order to ensure they are soundly based. A LWU has met the required outcome if it has prepared a sound 30-year water and/or sewerage strategic business plan and financial plan in accordance with the above Check List. Such a plan must include a sound 30-year total asset management plan (TAMP) (page 7) and demonstrate the long-term financial sustainability of the LWU's water and/or sewerage businesses and compliance with National Competition Policy. Where a LWU has a strategic business plan but the plan is more than 4 years old, it is deemed to have provisionally met the required outcome, and is shown as Yes\* in Table 3 on page 108 (columns 1) and Table 5 on page 116 (column 34). As noted on pages 110 and 119, such a LWU now needs to prepare a 30-year IWCM Strategy and 30-year financial plan in accordance with the July 2014 IWCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

As noted on page 20 each LWU needs to annually 'roll forward', review and update its 30-year total asset management plan for projects completed, modified or deferred and to prepare an updated 30-year financial plan. A brief report to Council should be provided on the updated financial plan, including any necessary corrective action (an example Report to Council is provided on page 131 of the *NSW Strategic Business Planning Guidelines*). Refer also to pages 104 and 108 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

**Pricing** – The **11 pricing outcomes required** by the NSW best-practice management framework (page 6) are outlined below. These incorporate implementation of the NSW Framework for Regulation of Sewerage and Trade Waste<sup>52</sup>, which includes implementation of appropriate sewerage and trade waste charges and developer charges, as well as a sound trade waste regulation policy and an approval for each trade waste discharger. As noted below, the required outcomes for pricing include a non-residential sewer usage charge/kL and non-compliance trade waste usage and excess mass charges. In addition, the framework for regulation of sewerage and trade waste also involves mentoring and coaching of dischargers and enforcement measures which include financial penalties and finally, disconnection of a trade waste discharger in the event of persistent failure to comply with approval conditions (page 6).

**Full cost recovery** – Full cost recovery (lower bound pricing) is achieved if either the economic real rate of return or the return on assets is  $\geq 0$  (shown as 'Y' in column 14d of Table 6 on page 134 and

<sup>52</sup> The NSW Framework for Regulation of Sewerage and Trade Waste is a preventative risk management approach for achieving effective and efficient use of the sewerage system, which is a common pool resource (page 6).

column 11a of Table 7 on page 146). As noted on page 353, assets must be valued at fair value and current replacement cost depreciation must be applied.

Alternatively, if a LWU has significantly increased its charges in order to recover its costs, it is also deemed to have full cost recovery (shown as 'Y\*' in column 14d of Table 6 on page 134 and column 11a of Table 7 on page 146). Refer also to page 22 of this report and to Appendix G on page 84 of the *2010-11 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

**Pay-for-use-pricing** – For water supply, this requires pay-for-use pricing, with the residential tariff independent of land value and no free water allowance. Refer to column 2a of Table 3 on page 108. Refer also to columns 1, 5b and 5d of Table 6 on page 134. All the NSW utilities have now met this required outcome.

**Residential water usage charges > 75%** - In order to provide strong pricing signals to residents and encourage efficient water use, the water supply tariff for LWUs with 4,000 or more connected properties must be such that at least 75% of residential revenue is obtained through water usage charges. At least 50% of residential revenue from usage charges is required for LWUs with fewer than 4,000 properties. Where a LWU has not met the above required outcomes but has obtained at least 70% (or 45% for fewer than 4,000 properties) of residential revenue from usage charges, it is deemed to have provisionally met the required outcome and is shown as Yes\*. Refer also to section 4.4 on page 13, Figure 13 on page 51, column 2c of Table 3 on page 108, column 13 of Table 6 on page 134 and pages 5 and 22 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

**Appropriate non-residential water supply charges** – Appropriate water usage charge per kL and access charge relative to customer's capacity requirements. Refer to column 2d of Table 3 on page 108.

**Residential sewerage charges** – Residential tariff is independent of land value. Refer to column 2b of Table 3 on page 108 and to column 3 of Table 7 on page 146.

**Non-residential sewerage charges** – This requires a two part tariff with an appropriate sewer usage charge per kL and an access charge that is reflective of the peak load the customer may place on the sewerage system. Refer to column 2c of Table 3 on page 108, Figure 44 on page 81, and to column 3a of Table 7 on page 146.

**Liquid trade waste fees and charges** – This requires appropriate trade waste fees and charges to be applied to all liquid trade waste dischargers. These include non-compliance trade waste usage and excess mass charges (page 6). Refer to column 2d of Table 3 on page 108 and to column 4 of Table 7 on page 146. Refer also to Figure 45 on page 82 and Table 7C on page 153.

A sound liquid **trade waste regulation policy** (endorsed by DPI Water) and an appropriate approval for each trade waste discharger is a further required outcome. Refer to column 2f of Table 3 on page 108 and Table 7C on page 153.

In view of the potential risks to sewerage infrastructure, public health and safety and the environment, from uncontrolled trade waste discharges, the acceptance of trade discharges to the sewerage system requires DPI Water's concurrence under section 90(1) of the *Local Government Act, 1993* ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)).

**Developer charges** – The required outcome is met if an appropriate Development Servicing Plan (DSP) with commercial developer charges is implemented. Utilities which have commercial developer charges but have not completed a DSP are assigned provisional implementation and are shown as Yes\*. In addition utilities with growth of under 5 lots/a are granted an exemption and are shown as Yes<sup>e</sup>. Refer to columns 2e of Table 3 on page 108. Refer also to column 7 of Table 6 on page 134 (water supply), column 7 of Table 7 on page 146 (sewerage). Until the release of any new developer charges guidelines, the NSW utilities are authorised to continue to annually index their existing water supply and sewerage developer charges.

**Complete Performance Report by due date** – A LWU meets the required outcome if it completes its performance reporting for water supply and/or sewerage by the due date (currently 15 September each year) and prepares and implements a sound annual Action Plan to Council. Refer to column 5 of Table 3 on page 108 (water supply) and column 3 on page 108 (sewerage).

**Water conservation** – The required outcome is met if the LWU has a water conservation and demand management plan. Refer to column 3 of Table 3 on page 108 and Table 8C on page 164.

**Drought management** – The required outcome is met if the LWU has a drought management plan. Refer to column 4 of Table 3 on page 108 and Table 8C on page 164.

**Integrated water cycle management** – A utility's IWCM Strategy needs to identify a 30-year strategy for water supply, sewerage and stormwater which provides the best value for money on the triple bottom line (TBL) basis of social, environmental and economic considerations. DPI Water reviews each LWU's IWCM Evaluation and IWCM Strategy to ensure they are soundly based. The IWCM Strategy needs to identify the best mix of capital works, non-build solutions, policies and operation and maintenance activities. Note that the 19 Best-Practice Management required outcomes aid the development of such a strategy through the required sound planning, pricing and management of services.

The required outcome is met if the LWU has commenced an integrated water cycle management (IWCM) study. Refer to column 6 of Table 3 on page 108 (water supply) and to column 4 on page 108 (sewerage). As indicated in note 5 on page 110, a utility which has completed its IWCM Strategy is shown as 'YesC' on page 108 and a utility which has only completed its IWCM Evaluation (Part 1 of the IWCM study) is shown as 'YesE' on page 108.

As indicated in Note 8 on page 110, LWUs whose IWCM Strategy is over 6 years old need to prepare a new 30-year IWCM Strategy, financial plan and report in accordance with the July 2014 IWCM Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)). Refer also to Appendix H on page 103 of the *2014-15 NSW Water Supply and Sewerage Performance Monitoring Report*.



## APPENDIX I: CERTIFICATION OF TREATMENT WORKS OPERATORS IN REGIONAL NSW

| LWU |                           | WATER SUPPLY                             |  |   |   | SEWERAGE                                 |   |   |
|-----|---------------------------|--|--|---|---|--|---|---|
|     |                           | Number of Water Treatment Operators* (1) | Number of Operators – Chemical Dosing <sup>+</sup> (2) | Number of WTW Operators in Training (3) | Meet National Certification Framework? <sup>a</sup> (4) | Number of Sewage Treatment Operators (5) | Number of STW Operators in Training (6) | Meet NSW Certification Requirements? <sup>2</sup> (7) |
| 11  | Albury                    | 2  | 1  |   | Yes   | 4  |   | Yes   |
| 29  | Armidale Dumaresq         | 1  | 3  |   | Yes   | 4  |   | Yes   |
| 24  | Ballina                   | 2  |  |   | Yes   | 13                                       |   | Yes   |
| 100 | Balranald                 | 4  | 1  |   | Yes   | 1  | 1                                       | Yes   |
| 21  | Bathurst Regional         | 4  |  |   | Yes   | 4  |   | Yes   |
| 23  | Bega Valley               | 16                                       |  |   | Yes   | 5  |   | Yes   |
| 47  | Bellingen                 | 1  |  | 2                                       | Yes   | 4  | 1                                       | Yes   |
| 53  | Berrigan                  | 4  |  |   | Yes   | 4  |   | Yes   |
| 72  | Bland (NO WS)             |  |  |   |   | 2  |   | Yes   |
| 78  | Blayney (NO WS)           |  |  |   |   | 2  |   | Yes   |
| 89  | Bogan                     | 1  | 1  | 2                                       | Yes   | 3  | 1                                       | Yes   |
| 97  | Bombala                   |  | 2  | 1                                       | Yes   | 4  |   | Yes   |
| 104 | Boorowa                   | 1  |  | 1                                       | Yes   | 3  |   | Yes   |
| 87  | Bourke                    | 1  |  | 2                                       | Yes   |  | 5                                       |   |
| 105 | Brewarrina                | 5  |  |   | Yes   | 6  |   | Yes   |
| 27  | Byron                     | 4  |  |   | Yes   | 4  |   | Yes   |
| 91  | Cabonne                   |  | 2  | 4                                       | Yes   | 6  |   | Yes   |
| 92  | Carrathool                | 3  | 2  | 1                                       | Yes   | 1  | 1                                       | Yes   |
| 103 | Central Darling           | 1  |  | 5                                       | Yes   | 1  |   | Yes   |
| 14  | Clarence Valley           | 2  |  |   | Yes   | 9  |   | Yes   |
| 67  | Cobar                     | 1  |  | 1                                       | Yes   |  | 2                                       |   |
| 10  | Coffs Harbour             | 3  |  |   | Yes   | 5  |   | Yes   |
| 99  | Coolamon (NO WS)          |  |  |   |   | 2  |   | Yes   |
| 50  | Cooma-Monaro              | 2  |  | 2                                       | Yes   | 3  |   | Yes   |
| 75  | Coonamble                 | 1  |  | 3                                       | Yes   | 6  | 2                                       | Yes   |
| 42  | Corowa                    | 5  |  | 2                                       | Yes   | 7  |   | Yes   |
| 39  | Cowra                     | 6  |  | 2                                       | Yes   | 4  |   | Yes   |
| 40  | Central Tablelands        | 2  |  | 1                                       | Yes   |  |   |   |
| 58  | Cootamundra (Reticulator) |  |  |   |   | 2  |   | Yes   |
| 54  | Deniliquin                | 2  |  |   | Yes   | 2  |   | Yes   |
| 18  | Dubbo                     | 3  |  | 1                                       | Yes   | 4  |   | Yes   |
| 26  | Essential Energy          | 6  |  | 2                                       | Yes   | 6  |   | Yes   |
| 15  | Eurobodalla               | 3  | 2  | 1                                       | Yes   | 7  |   | Yes   |
| 12  | Fish River (NO SGE)       | 1  |  | 1                                       | Yes   |  |   |   |
| 51  | Forbes                    | 2  | 1  |   | Yes   | 1  |   | Yes   |
| 84  | Gilgandra                 | 2  | 2  |   | Yes   | 4  |   | Yes   |
| 60  | Glen Innes Severn         | 3  |  | 1                                       | Yes   | 3  | 1                                       | Yes   |
| 1   | Gosford                   | 4  |  |   | Yes   | 6  |   | Yes   |
| 20  | Goulburn Mulwaree         | 4  |  |   | Yes   | 5  | 2                                       | Yes   |
| 80  | Greater Hume              | 2  |  |   | Yes   | 5  |   | Yes   |
| 30  | Griffith                  | 2  |  | 1                                       | Yes   | 3  |   | Yes   |
| 94  | Gundagai                  | 2  |  |   | Yes   | 4  | 1                                       | Yes   |
| 44  | Gunnedah                  | 2  |  |   | Yes   | 2  |   | Yes   |
| 90  | Guyra                     | 4  |  | 1                                       | Yes   | 2  |   | Yes   |
| 28  | Goldenfields (NO SGE)     | 2  | 1  |   | Yes   |  |   |   |
| 81  | Gwydir                    | 4  | 1  |   | Yes   | 5  | 1                                       | Yes   |
| 76  | Harden (Reticulator)      | 1  |  |   | Yes   | 2  |   | Yes   |
| 30A | Hawkesbury (NO WS)        |  |  |   |   | 3  |   | Yes   |
| 86  | Hay                       | 3  |  | 1                                       | Yes   | 4  |   | Yes   |
| 37  | Inverell                  | 2  |  |   | Yes   | 4  |   | Yes   |
| 106 | Jerilderie                | 1  | 1  |   | Yes   | 2  |   | Yes   |
| 77  | Junee (NO WS)             |  |  |   |   | 2  |   | Yes   |
| 25  | Kempsey                   | 7  |  |   | Yes   | 8  |   | Yes   |
| 70  | Kyogle                    | 7  |  |   | Yes   | 7  |   | Yes   |
| 59  | Lachlan                   | 4  |  | 2                                       | Yes   | 1  | 1                                       | Yes   |
| 48  | Leeton                    | 4  |  |   | Yes   | 3  |   | Yes   |
| 22  | Lismore                   | 3  |  |   | Yes   | 4  |   | Yes   |
| 31  | Lithgow                   | 1  |  |   | Yes   | 6  |   | Yes   |
| 61  | Liverpool Plains          | 4  |  |   | Yes   | 3  |   | Yes   |
| 102 | Lockhart (NO WS)          |  |  |   |   | 3  |   | Yes   |
| 5   | MidCoast                  | 13                                       | 2  |   | Yes   | 16                                       |   | Yes   |
| 32  | Mid Western Regional      | 8  |  | 2                                       | Yes   | 8  |   | Yes   |
| 38  | Moree Plains              | 3  |  |   | Yes   | 4  |   | Yes   |
| 65  | Murray                    | 2  |  | 3                                       | Yes   | 6  |   | Yes   |
| 101 | Murrumbidgee              | 3  |  |   | Yes   | 2  |   | Yes   |
| 41  | Muswellbrook              | 6  |  | 1                                       | Yes   | 3  |   | Yes   |

## APPENDIX I: CERTIFICATION OF TREATMENT WORKS OPERATORS IN REGIONAL NSW

| LWU          |                          | WATER SUPPLY                             |  |   |   | SEWERAGE                                 |   |   |
|--------------|--------------------------|--|--|---|---|--|---|---|
|              |                          | Number of Water Treatment Operators* (1) | Number of Operators – Chemical Dosing <sup>+</sup> (2) | Number of WTW Operators in Training (3) | Meet National Certification Framework? <sup>α</sup> (4) | Number of Sewage Treatment Operators (5) | Number of STW Operators in Training (6) | Meet NSW Certification Requirements? <sup>2</sup> (7) |
| 34           | Nambucca                 | 3  |  |   | Yes   | 5  |   | Yes   |
| 46           | Narrabri                 | 4  |  | 3                                       | Yes   | 4  | 1                                       | Yes   |
| 63           | Narrandera               | 2  |  | 1                                       | Yes   | 4  |   | Yes   |
| 62           | Narromine                | 3  |  | 1                                       | Yes   | 4  |   | Yes   |
| 83           | Oberon                   | 3  |  |   | Yes   | 1  | 2                                       | Yes   |
| 19           | Orange                   | 3  |  | 1                                       | Yes   | 4  |   | Yes   |
| 71           | Palerang                 |  | 6  |   | Yes   | 6  |   | Yes   |
| 36           | Parkes                   | 2  |  | 1                                       | Yes   | 3  |   | Yes   |
| 7            | Port Macquarie-Hastings  | 6  |  |   | Yes   | 11                                       |   | Yes   |
| 17           | Queanbeyan (Reticulator) |  |  |   |   | 3  |   | Yes   |
| 33           | Richmond Valley          | 1  |  | 1                                       | Yes   | 4  | 1                                       | Yes   |
| 4            | Rous (NO SGE)            | 4  |  |   | Yes   |  |   |   |
| 8            | Riverina (NO SGE)        | 4  |  |   | Yes   |  |   |   |
| 3            | Shoalhaven               | 8  |  |   | Yes   | 7  | 25                                      | Yes   |
| 35           | Singleton                | 4  |  |   | Yes   | 3  | 1                                       | Yes   |
| 52           | Snowy River              | 6  | 1  |   | Yes   | 6  |   | Yes   |
| 13           | Tamworth Regional        | 12                                       |  |   | Yes   | 11                                       |   | Yes   |
| 69           | Temora (NO WS)           |  |  |   |   | 1  | 1                                       | Yes   |
| 68           | Tenterfield              | 4  |  |   | Yes   | 4  |   | Yes   |
| 93           | Tumbarumba               | 2  |  |   | Yes   | 4  |   | Yes   |
| 43           | Tumut                    | 5  | 1  |   | Yes   | 8  |   | Yes   |
| 6            | Tweed                    | 5  |  |   | Yes   | 10                                       | 2                                       | Yes   |
| 45           | Upper Hunter             | 3  | 2  |   | Yes   | 3  |   | Yes   |
| 73           | Upper Lachlan            | 1  | 3  | 1                                       | Yes   | 4  | 1                                       | Yes   |
| 85           | Uralla                   | 3  | 1  |   | Yes   | 2  |   | Yes   |
| 107          | Urana (NO WS)            |  |  |   |   | 2  |   | Yes   |
| 88           | Wakool                   | 4  |  |   | Yes   | 4  |   | Yes   |
| 9            | Wagga Wagga (NO WS)      |  |  |   |   | 8  |   | Yes   |
| 98           | Walcha                   | 4  |  |   | Yes   |  | 4                                       |   |
| 79           | Walgett                  | 1  |  | 4                                       | Yes   |  | 5                                       |   |
| 96           | Warren                   | 3  |  |   | Yes   | 1  | 1                                       | Yes   |
| 55           | Warrumbungle             | 9  | 2  |   | Yes   | 2  | 5                                       | Yes   |
| 95           | Weddin (NO WS)           |  |  |   |   | 2  |   | Yes   |
| 57           | Wellington               | 2  |  |   | Yes   | 2  |   | Yes   |
| 74           | Wentworth                | 2  |  | 2                                       | Yes   | 2  |   | Yes   |
| 16           | Wingecarribee            | 3  |  | 1                                       | Yes   | 9  |   | Yes   |
| 2            | Wyang                    | 3  |  |   | Yes   | 14                                       |   | Yes   |
| 56           | Yass Valley              | 2  | 1  | 1                                       | Yes   | 2  | 1                                       | Yes   |
| 49           | Young (Reticulator)      |  |  |   |   | 3  |   | Yes   |
| <b>TOTAL</b> |                          | <b>309</b>                               | <b>39</b>  | <b>68</b>                               | <b>92</b>   | <b>419</b>                               | <b>65</b>                               | <b>96</b>   |

**Notes:**

- Columns 1 and 2 above show that each of the 91<sup>#</sup> NSW LWUs responsible for providing water treatment for a drinking water supply has at least one fully qualified water treatment operator who meets the requirements of the National Certification Framework for water treatment operators (column 4). A total of 348 operators meet the National Certification Framework, including 309 operators qualified to operate a water treatment works or a chlorinator/aerator (column 1) and 39 operators qualified to operate a chlorinator/aerator (column 2). A further 68 operators are currently undertaking training in water treatment operation (column 3).
  - Column 5 above shows that the LWUs have 419 fully qualified wastewater treatment operators who met the NSW Certification requirements (column 7), involving a Certificate III in Water Operations (Wastewater Treatment) or equivalent and are employed in operating a LWU sewage treatment works. A further 65 operators are currently undergoing training, including 16 operators at Bourke, Cobar, Walcha and Walgett (column 6).
- # Excludes the 9 LWUs responsible for sewerage only, reticulators Cootamundra, Harden, Queanbeyan, and Young, and Cobar Water Board, which provides a bulk raw water supply.
- \* Such operators have a Certificate III in Water Operations (Water Treatment) or equivalent and are employed in operating a LWU treatment works or a chlorinator/aerator (refer to page 23 of NSW Guidelines for drinking water management systems, NSW Health and NSW Office of Water, 2013 (<http://www.health.nsw.gov.au/environment/water/Documents/NSW-Guidelines%20for-Drinking-Water-Management-Systems.pdf>)).
- + Such operators have a DPI Water Part 1 Certificate (Chemical Dosing Systems) or equivalent, have also completed chlorine safety training and are employed in operating a LWU chlorinator/aerator (refer to page 23 of NSW Guidelines for drinking water management systems).

<sup>α</sup> [http://nwc.gov.au/\\_\\_data/assets/pdf\\_file/0019/25345/Proposed-National-Certification-Framework.pdf](http://nwc.gov.au/__data/assets/pdf_file/0019/25345/Proposed-National-Certification-Framework.pdf)

## APPENDIX J: LIVEABILITY INDICATORS FOR REGIONAL NSW

|     | LWU                  | Number of Residential Rainwater Tanks (1) | Typical Rainwater Tank Volume (kL) (2) | WSUD Residential Lots Released (3) |         | Development Control Plan? (4) | Stormwater Channels Managed Under WSUD Principles (km) (5) |
|-----|----------------------|---|--|------------------------------------|---------|-------------------------------|--|
|     |                      |   |  | 2013-14                            | 2014-15 |                               |  |
| 11  | Albury               | 181                                       | 6.5                                    |                                    | 332     | Yes                           | 0  |
| 29  | Armidale Dumaresq    | 1,342                                     | 4.7                                    | 0                                  | 0       | No                            | 5.5  |
| 24  | Ballina              |   |  | 132                                | 142     | Yes                           |  |
| 100 | Balranald            |   |  | 0                                  | 0       | No                            | 0  |
| 21  | Bathurst Regional    |   |  | 0                                  | 124     | No                            | 3.3  |
| 23  | Bega Valley          | 1,800                                     | 5                                      | 126                                | 167     | Yes                           | 0  |
| 47  | Bellingen            |   |  | 4                                  | 0       | Yes                           | 0  |
| 53  | Berrigan             | 100                                       | 5                                      | 0                                  | 0       | No                            | 0  |
| 89  | Bogan                |   |  |                                    |         |                               |  |
| 97  | Bombala              |   |  | 0                                  | 0       | No                            | 0  |
| 104 | Boorowa              | 452                                       | 15                                     | 0                                  | 0       | No                            | 1  |
| 87  | Bourke               | 150                                       | 10                                     | 0                                  | 0       | No                            | 0  |
| 105 | Brewarrina           |   |  | 0                                  |         |                               |  |
| 27  | Byron                | 671                                       | 3                                      |                                    |         | Yes                           |  |
| 91  | Cabonne              |   |  | 0                                  | 0       | No                            |  |
| 92  | Carrathool           |   |  |                                    |         |                               |  |
| 103 | Central Darling      |   |  | 0                                  | 0       | No                            | 0  |
| 14  | Clarence Valley      | 289                                       | 14                                     | 0                                  |         | Yes                           | 0  |
| 67  | Cobar                |   |  |                                    |         |                               |  |
| 10  | Coffs Harbour        | 1,886                                     | 4.8                                    |                                    |         | Yes                           |  |
| 50  | Cooma-Monaro         |   |  | 0                                  | 0       | No                            | 0  |
| 75  | Coonamble            |   |  |                                    | 0       |                               | 0  |
| 58  | Cootamundra          |   |  |                                    |         |                               |  |
| 42  | Corowa               |   |  | 0                                  | 0       | No                            | 0  |
| 39  | Cowra                |   |  | 0                                  | 0       | No                            | 0  |
| 40  | Central Tablelands   |   |  |                                    |         |                               |  |
| 54  | Deniliquin           | 0   | 0                                      |                                    | 0       | No                            | 0  |
| 18  | Dubbo                | 220                                       | 5                                      | 235                                | 0       | Yes                           |  |
| 26  | Essential Energy     |   |  |                                    |         |                               |  |
| 15  | Eurobodalla          |   |  |                                    |         |                               |  |
| 12  | Fish River           |   |  | 0                                  |         |                               |  |
| 51  | Forbes               | 979                                       | 1                                      |                                    |         |                               |  |
| 84  | Gilgandra            | 339                                       | 1                                      | 0                                  | 0       | No                            | 0  |
| 60  | Glen Innes Severn    |   |  | 0                                  | 0       | No                            | 0  |
| 1   | Gosford              | 9,032                                     | 2                                      |                                    |         | Yes                           | 28.4   |
| 20  | Goulburn Mulwaree    |   | 10                                     | 273                                | 137     | Yes                           | 8  |
| 80  | Greater Hume         |   |  | 0                                  | 0       | No                            | 0  |
| 30  | Griffith             |   |  |                                    |         |                               |  |
| 94  | Gundagai             |   |  |                                    |         |                               |  |
| 90  | Guyra                | 540                                       | 5                                      | 0                                  | 0       | No                            | 0  |
| 28  | Goldenfields         |   |  |                                    |         |                               |  |
| 44  | Gunnedah             |   | 20                                     |                                    | 0       |                               | 0  |
| 81  | Gwydir               | 1,500                                     | 4                                      | 0                                  | 0       | No                            | 0  |
| 76  | Harden               | 0   | 0                                      | 0                                  | 0       | No                            | 0  |
| 86  | Hay                  |   |  | 0                                  | 0       | No                            | 0  |
| 37  | Inverell             |   |  |                                    | 0       | No                            | 0  |
| 106 | Jerilderie           | 360                                       | 1                                      | 0                                  | 0       |                               | 0  |
| 25  | Kempsey              | 0   | 0                                      | 0                                  | 0       | Yes                           | 5  |
| 70  | Kyogle               | 1   | 4.5                                    |                                    |         | Yes                           | 5  |
| 59  | Lachlan              |   |  |                                    |         |                               |  |
| 48  | Leeton               |   |  |                                    | 0       | No                            | 0  |
| 22  | Lismore              |   |  | 2                                  | 3       | Yes                           | 89   |
| 31  | Lithgow              |   |  |                                    |         |                               |  |
| 61  | Liverpool Plains     |   | 22                                     |                                    | 0       | No                            | 0  |
| 5   | MidCoast             |   |  |                                    |         |                               |  |
| 32  | Mid Western Regional | 1,588                                     | 3                                      | 27                                 | 38      | Yes                           | 0.56   |
| 38  | Moree Plains         |   |  |                                    |         |                               |  |
| 65  | Murray               |   |  |                                    |         |                               |  |
| 101 | Murrumbidgee         |   |  |                                    |         |                               |  |
| 41  | Muswellbrook         |   |  |                                    |         |                               |  |
| 34  | Nambucca             |   | 5                                      | 0                                  | 0       | No                            | 0  |
| 46  | Narrabri             |   |  | 0                                  | 0       | No                            | 0  |
| 63  | Narrandera           |   |  | 0                                  |         | Yes                           |  |
| 62  | Narromine            |   |  |                                    | 0       | No                            | 0  |
| 83  | Oberon               |   |  | 0                                  | 0       | No                            | 0  |
| 19  | Orange               |   |  | 0                                  | 56      | Yes                           | 0  |



APPENDIX J: LIVEABILITY INDICATORS FOR REGIONAL NSW

| LWU |                         | Number of Residential Rainwater Tanks (1) | Typical Rainwater Tank Volume (kL) (2) | WSUD Residential Lots Released (3) |         | Development Control Plan? (4)           | Stormwater Channels Managed Under WSUD Principles (km) (5) |
|-----|-------------------------|---|--|------------------------------------|---------|---|--|
|     |                         |   |  | 2013-14                            | 2014-15 |   |  |
| 71  | Palerang                | 550                                       | 22                                     | 0                                  | 0       | No                                      | 0  |
| 36  | Parkes                  |   |  |                                    | 0       | Yes                                     | 0  |
| 7   | Port Macquarie-Hastings |   |  |                                    |         |   |  |
| 17  | Queanbeyan              | 152                                       |  | 337                                | 233     | No                                      | 0  |
| 33  | Richmond Valley         |   |  |                                    |         |   |  |
| 4   | Rous                    |   |  |                                    |         |   |  |
| 8   | Riverina                | 0   | 0                                      | 0                                  | 0       |   | 0  |
| 3   | Shoalhaven              |   |  |                                    |         | No                                      |  |
| 35  | Singleton               | 2,149                                     | 10                                     | 44                                 | 4       | Yes                                     | 0  |
| 52  | Snowy River             |   |  |                                    | 7       |   | 1  |
| 13  | Tamworth Regional       |   |  |                                    |         |   |  |
| 68  | Tenterfield             |   |  |                                    | 0       |   | 0  |
| 93  | Tumbarumba              |   |  |                                    |         |   |  |
| 43  | Tumut                   |   |  |                                    |         |   |  |
| 6   | Tweed                   | 1,873                                     | 5                                      | 369                                | 272     | No                                      | 1.4  |
| 45  | Upper Hunter            |   |  | 0                                  | 0       | No                                      | 0  |
| 73  | Upper Lachlan           |   |  |                                    |         |   |  |
| 85  | Uralla                  | 245                                       | 5                                      | 0                                  | 0       | No                                      | 0  |
| 9   | Wagga Wagga             |   |  |                                    |         | No                                      | 52   |
| 88  | Wakool                  |   |  |                                    |         |   |  |
| 98  | Walcha                  |   |  | 0                                  |         |   |  |
| 79  | Walgett                 |   |  | 0                                  | 0       | No                                      | 0  |
| 96  | Warren                  | 200                                       | 5                                      | 0                                  | 0       | No                                      | 0  |
| 55  | Warrumbungle            |   |  | 0                                  | 0       | No                                      | 0.2  |
| 57  | Wellington              | 287                                       | 5                                      |                                    |         |   |  |
| 74  | Wentworth               |   |  |                                    |         |   |  |
| 16  | Wingecarribee           | 395                                       | 5                                      | 68                                 | 257     | Yes                                     | 14.6   |
| 2   | Wyong                   | 10,000                                    |  | 100                                | 450     | Yes                                     | 1  |
| 56  | Yass Valley             | 600                                       | 4.5                                    | 0                                  | 0       | No                                      | 0  |
| 49  | Young                   | 1,000                                     | 5                                      | 0                                  | 0       | No                                      | 0  |
|     | TOTAL                   | 39,000 (for 33 LWUs)                      | 3 to 5 kL (typical for 35 LWUs)        | 1700                               | 2200    | 20 LWUs have a Development Control Plan | 216 km (for 15 LWUs)                                       |

- Notes:**
- The results shown above have been reported by a total of 69 LWUs in the 2014-15 data collection for the above performance indicators. More utilities are expected to be able to report in future data collections.
  - In 2014-15, 14 LWUs released a total of 2,200 water sensitive urban design (WSUD) residential lots, compared to a total of 1,700 in 2013-14.

APPENDIX K: CHARACTERISTICS OF THE AUSTRALIAN URBAN WATER SECTOR - 2014-15

|           |   | Regional<br>NSW <sup>3</sup> | Regional<br>Victoria | Regional<br>QLD <sup>4</sup> | Sydney <sup>2</sup> | Hunter | NSW<br>Total | Victoria<br>Total <sup>9</sup> | QLD<br>Total <sup>5</sup> | South<br>Australia | Western<br>Australia <sup>7</sup> | Tasmania         | ACT   | Northern<br>Territory <sup>10</sup> | Australian<br>Total <sup>1</sup> | Regional NSW<br>(% of NSW<br>Total) | NSW Total<br>(% of Australia<br>Total) |
|-----------|---|------------------------------|----------------------|------------------------------|---------------------|--------|--------------|--------------------------------|---------------------------|--------------------|-----------------------------------|------------------|-------|-------------------------------------|----------------------------------|-------------------------------------|--|
| NWI ID    | Indicator Name  | (1)                          | (2)                  | (3)                          | (4)                 | (5)    | (6)          | (7)                            | (8)                       | (9)                | (10)                              | (11)             | (12)  | (13)                                | (14)                             | (15)                                | (16)                                   |
|           |   |                              |                      |                              |                     |        |              |                                |                           |                    |                                   |                  |       |                                     |                                  |                                     |  |
| C1        | Population receiving WS services (millions)                             | 1.83                         | 1.43                 | 2.79                         | 4.83                | 0.56   | 7.22         | 5.87                           | 4.18                      | 1.66               | 2.26                              | 0.45             | 0.43  | 0.15                                | 22.2                             | 25%                                 | 32%                                    |
| C5        | Population receiving SGE services (millions)                            | 1.74                         | 1.28                 | 2.51                         | 4.72                | 0.54   | 7.00         | 5.55                           | 3.84                      | 1.31               | 2.10                              | 0.38             | 0.39  | 0.15                                | 20.7                             | 25%                                 | 34%                                    |
| C4        | Total connected properties - WS (millions)                              | 0.83                         | 0.68                 | 1.18                         | 1.88                | 0.24   | 2.94         | 2.56                           | 1.74                      | 0.76               | 0.94                              | 0.20             | 0.17  | 0.07                                | 9.39                             | 28%                                 | 31%                                    |
| C8        | Total connected properties - SGE (millions)                             | 0.75                         | 0.60                 | 1.04                         | 1.83                | 0.23   | 2.81         | 2.40                           | 1.58                      | 0.59               | 0.85                              | 0.18             | 0.17  | 0.07                                | 8.63                             | 27%                                 | 33%                                    |
|           |   |                              |                      |                              |                     |        |              |                                |                           |                    |                                   |                  |       |                                     |                                  |                                     |  |
| W11       | Total urban water supplied (GL)   | 291                          | 238                  | 384                          | 529                 | 70     | 890          | 639                            | 527                       | 229                | 308                               | 74 <sup>8</sup>  | 45    | 47                                  | 2,760                            | 33%                                 | 32%                                    |
| W11.1     | Total urban potable water supplied (GL)                                 | 260                          | 192                  | 337                          | 464                 | 67     | 790          | 593                            | 475                       | 219                | 269 <sup>7</sup>                  | 49               | 43    |                                     | 2,440                            | 33%                                 | 32%                                    |
| W11.3     | Total volume of potable water produced (GL)                             | 255                          | 186                  | 202                          | 516                 | 67     | 838          | 587                            | 494                       | 219                | 270 <sup>7</sup>                  |                  | 47    |                                     | 2,450                            | 30%                                 | 34%                                    |
| W8.1+W9.1 | Volume of potable water supplied - residential and non-residential (GL) | 227                          | 174                  | 309                          | 464                 | 56     | 747          | 531                            | 432                       | 187                | 238 <sup>7</sup>                  | 49               | 39    |                                     | 2,220                            | 30%                                 | 34%                                    |
| W10.1     | Non revenue water (NRW) (GL)  | 33.0                         | 18.3                 | 28.2                         | 52 <sup>6</sup>     | 10.6   | 96           | 61.8                           | 42.9                      | 32.3               | 30.3 <sup>7</sup>                 |                  | 3.8   |                                     | 267                              | 35%                                 | 36%                                    |
| W26       | Total recycled water supplied (GL)                                      | 39.0                         | 43.8                 | 35.5                         | 43.1                | 4.6    | 87           | 80.2                           | 44.8                      | 31.7               | 15.1                              | 4.8              | 4.4   | 1.4                                 | 269                              | 45%                                 | 32%                                    |
| W18       | Total sewage collected (GL)   | 179                          | 135                  | 235                          | 564                 | 72     | 815          | 462                            | 360                       | 104                | 153                               | 51 <sup>8</sup>  | 33    | 20                                  | 2,000                            | 22%                                 | 41%                                    |
| W18.5     | Volume of sewage treated effluent (GL)                                  | 173                          | 121                  | 228                          | 547                 | 72     | 792          | 450                            | 357                       | 98                 | 137 <sup>7</sup>                  |                  | 30    |                                     | 1,860                            | 22%                                 | 43%                                    |
| W17       | Volume of sewage collected - trade waste (GL)                           | 6.8                          | 34.1                 | 13.1                         | 22.8                | 4.7    | 34           | 56.5                           | 25.0                      | 12.6               | 8.4                               |                  |       | 1.1                                 | 138                              | 20%                                 | 25%                                    |
|           |   |                              |                      |                              |                     |        |              |                                |                           |                    |                                   |                  |       |                                     |                                  |                                     |  |
| F1+F2     | Total revenue - WSS (\$M)   | 1,420                        | 961                  | 2,490                        | 2,640               | 312    | 4,370        | 4,720                          | 4,440                     | 1,360              | 1,810                             | 296              | 266   | 178 <sup>10</sup>                   | 17,400                           | 32%                                 | 25%                                    |
| IF11+IF12 | Operating cost - WSS (\$M)  | 735                          | 507                  | 1,149                        | 1,232               | 145    | 2,110        | 3,031                          | 1,786                     | 466                | 583                               | 166              | 126   | 73 <sup>10</sup>                    | 8,300                            | 35%                                 | 25%                                    |
| F20       | Dividend (\$M)  | 4.7                          | 0.0                  | 173.7                        | 664.0               | 21.3   | 690          | 102.8                          | 247.8                     | 184.0              | 538.9                             | 22.1             | 22.8  | 0 <sup>10</sup>                     | 1,810                            | 1%                                  | 38%                                    |
| F9+F10    | Written-down value of fixed WSS assets (\$M)                            | 18,300                       | 8,980                | 14,600                       | 44,100              | 6,890  | 69,300       | 31,100                         | 19,400                    | 13,000             | 14,300                            | 2,690            | 3,740 | 856 <sup>10</sup>                   | 154,000                          | 26%                                 | 45%                                    |
| F16       | Total capital expenditure for WSS (\$M)                                 | 416                          | 269                  | 473                          | 628                 | 77     | 1,120        | 955                            | 751                       | 214                | 396                               | 102              | 49    | 35 <sup>10</sup>                    | 3,600                            | 37%                                 | 31%                                    |
| F25       | Community Service Obligations (\$M)                                     | 15.5                         | 46.0                 | 25.0                         | 163.1               | 14.3   | 193          | 163.7                          | 48.6                      | 128.0              | 136.7                             | 8.1              | 10.6  | 9 <sup>10</sup>                     | 698                              | 8%                                  | 28%                                    |
| F26+F27   | Capital works grants - WSS (\$M)  | 39.8                         | 2.9                  | 6.6                          | 4.8                 | 0.2    | 45           | 10.3                           | 6.6                       | 8.7                | 0.0                               | 0.0              | 0.0   | 0.0                                 | 70                               | 89%                                 | 64%                                    |
|           |   |                              |                      |                              |                     |        |              |                                |                           |                    |                                   |                  |       |                                     |                                  |                                     |  |
| A2        | Length of water mains (1,000 km)  | 32.2                         | 22.5                 | 27.8                         | 22.3                | 4.9    | 59           | 48.2                           | 37.8                      | 27.1               | 17.3                              | 6.2 <sup>8</sup> | 3.2   | 1.8                                 | 201                              | 54%                                 | 30%                                    |
| A5        | Length of SGE mains and channels (1,000 km)                             | 19.9                         | 14.8                 | 21.7                         | 25.1                | 4.9    | 50           | 37.7                           | 31.0                      | 8.9                | 14.6                              | 4.7 <sup>8</sup> | 3.3   | 1.0                                 | 151                              | 40%                                 | 33%                                    |
| A1        | Number of water treatment plants providing full treatment (no.)         | 163                          | 170                  | 67                           | 9                   | 6      | 178          | 176                            | 98                        | 42                 | 22                                | 38 <sup>8</sup>  | 2     | 2 <sup>10</sup>                     | 558                              | 92%                                 | 32%                                    |
| A4        | Number of sewage treatment plants (no.)                                 | 299                          | 189                  | 118                          | 26                  | 19     | 344          | 210                            | 145                       | 24                 | 22                                | 112 <sup>8</sup> | 5     | 7                                   | 869                              | 87%                                 | 40%                                    |

Notes

- 1 Based on data reported in the Part B National Performance Report 2014-15 for utilities with over 10,000 connected properties and the urban data for all of regional NSW ([www.bom.gov.au](http://www.bom.gov.au)). In order to provide the best estimate for the Australian totals in column 14, where practicable, performance indicators which were not reported in the Part B Report have been estimated from similar reported indicators, as shown in notes 6 to 10 below. As there remain a small number of missing values for Tasmania, ACT and the Northern Territory, the Australian totals in column 14 for those performance indicators (W11.1, W11.3, W8.1+W9.1, W10.1, W18.5, W17) slightly understate the correct values. Refer also to Notes 6 and 7 on page 205.
- 2 Includes Water NSW for Sydney.
- 3 Includes Water NSW for the Fish River Water Supply.
- 4 Includes Gladstone Area Water Board.
- 5 Includes SEQ Water, except where duplicated reporting has occurred - eg. for W11 and W11.3.
- 6 Sydney's NRW is estimated as W11.3 - (W8.1 + W9.1).
- 7 As Perth did not report W10.1, W11.1 or W18.5, the reported values for W10, W11 and W18 have been used in the above tabulation. W11 was also used for W11.3, with W8 + W9 used for W8.1 + W9.1.
- 8 Results for Tasmania for indicators W11, W18, A2, A5, A1 and A4 are taken from the TasWater Annual Report 2014-15 ([www.taswater.com.au](http://www.taswater.com.au)).
- 9 As Melbourne Water did not report W11.3, the reported value for W11.1 has been used in the above tabulation.
- 10 Financial results for Northern Territory are from the 2013-14 National Performance Report. The number of water treatment works was obtained from the Power and Water website ([www.powerwater.com.au](http://www.powerwater.com.au)).

WS Water Supply  
WSS Water Supply and Sewerage  
SGE Sewerage

### Regional NSW vs NSW Totals

Appendix K shows that the populations receiving water supply and sewerage services in regional NSW are each 25% of the NSW totals of 7.22 million and 7.0 million respectively. The volume of urban water supplied in regional NSW is 33% of the NSW total of 890 GL and the recycled water supplied is 45% of the NSW total of 87 GL.

The water and sewerage revenue for regional NSW is 32% of the NSW total of \$4.37 billion, the operating cost is 35% of the NSW total of \$2.11 billion and capital expenditure is 37% of the NSW total of \$1.12 billion.

Regional NSW has 54% of the 59,000 km of NSW water mains, 40% of the 50,000 km of NSW sewerage mains and channels, 92% of the 178 NSW water treatment works and 87% of the 344 NSW sewage treatment works.

### NSW vs Australian Totals

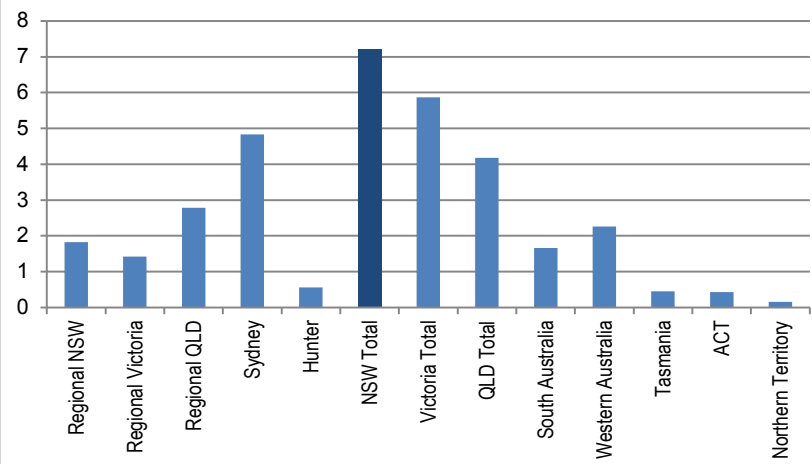
Appendix K shows that the total populations receiving water supply and sewerage services in NSW are 32% and 34% respectively of the Australian totals of 22.2 million and 20.7 million. The volume of urban water supplied in NSW is 32% of the Australian total of 2,760 GL, and the recycled water supplied in NSW is 32% of the Australian total of 269 GL.

The water and sewerage revenue for NSW is 25% of the Australian total of \$17.4 billion, the operating cost is 25% of the Australian total of \$8.3 billion and capital expenditure is 31% of the Australian total of \$3.6 billion.

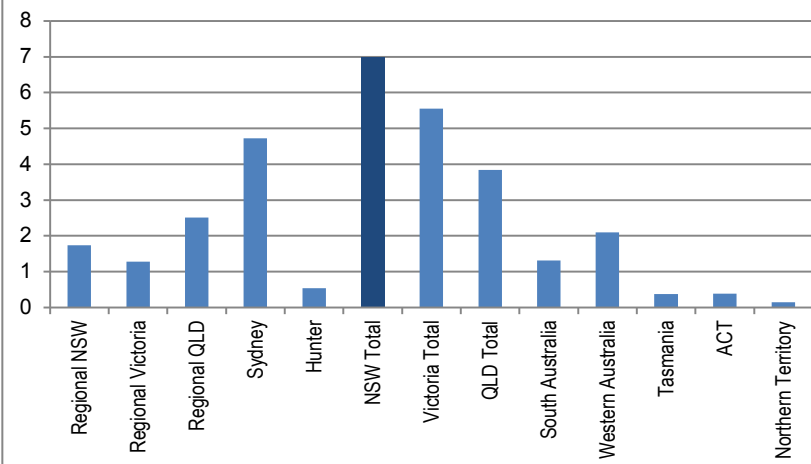
NSW has 30% of the 201,000 km of Australian water mains, 33% of the 151,000 km of Australian sewerage mains and channels, 32% of the 558 Australian water treatment works and 40% of the 869 Australian sewage treatment works.



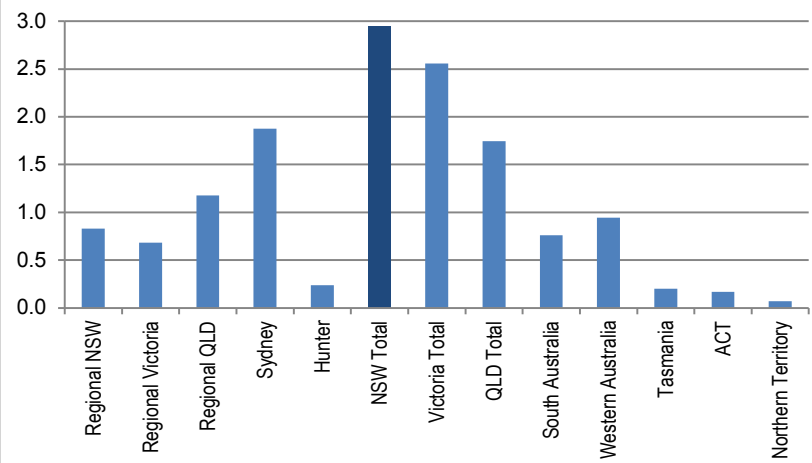
Population receiving WS services (millions) - C1



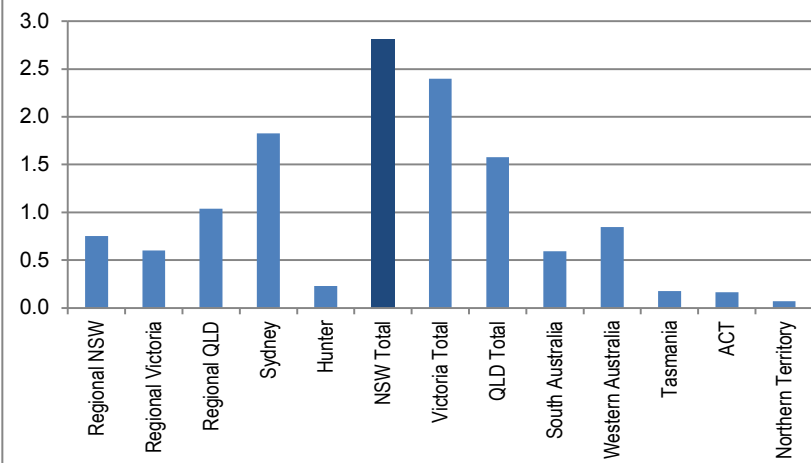
Population receiving SGE services (millions) - C5



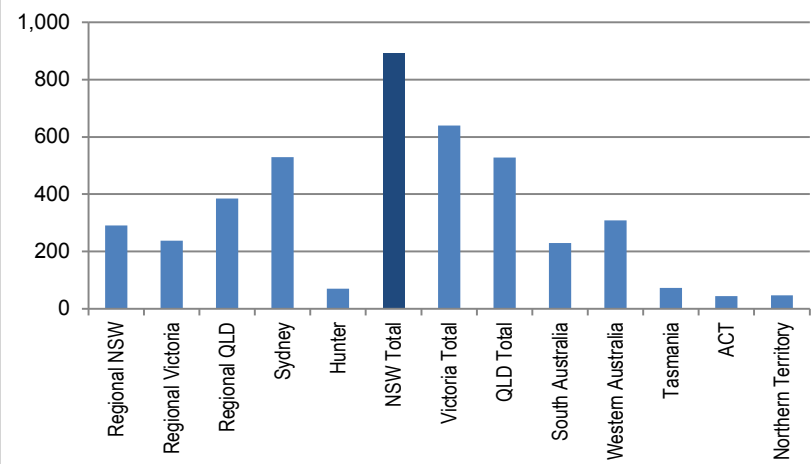
Total connected properties - WS (millions) - C4



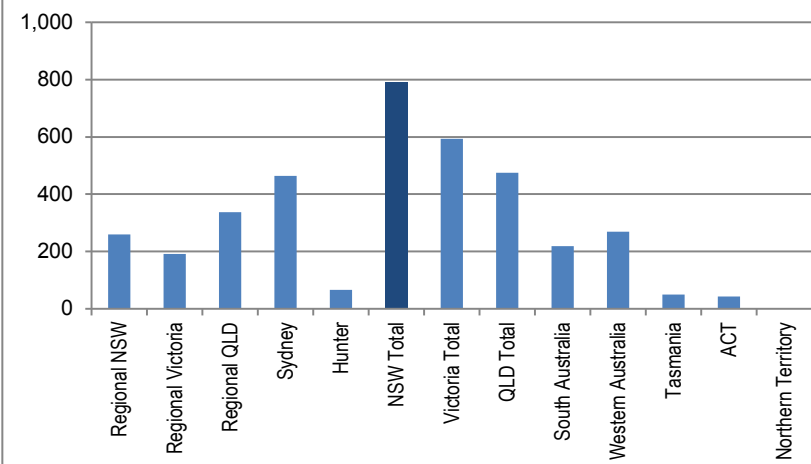
Total connected properties - SGE (millions) - C8



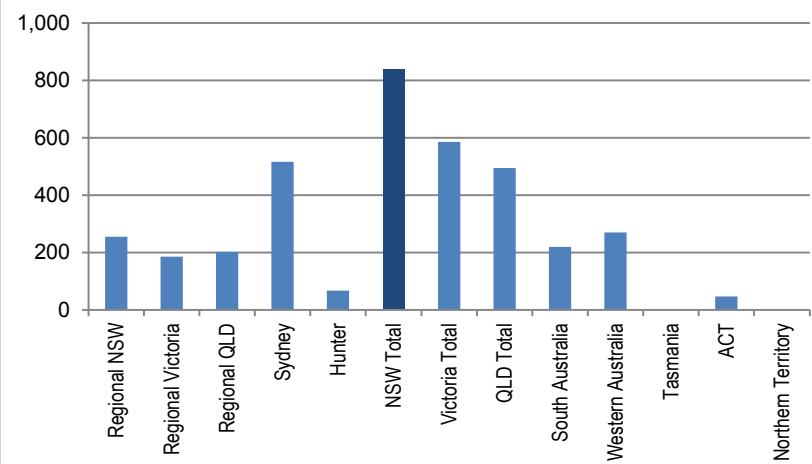
Total urban water supplied (GL) - W11



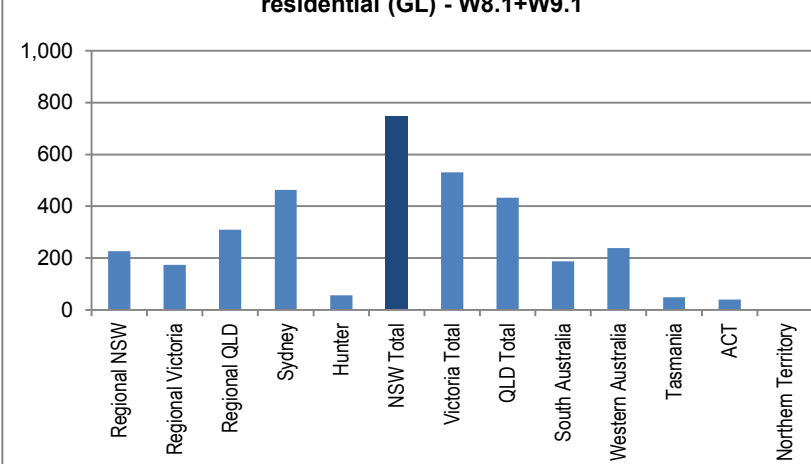
Total urban potable water supplied (GL) - W11.1

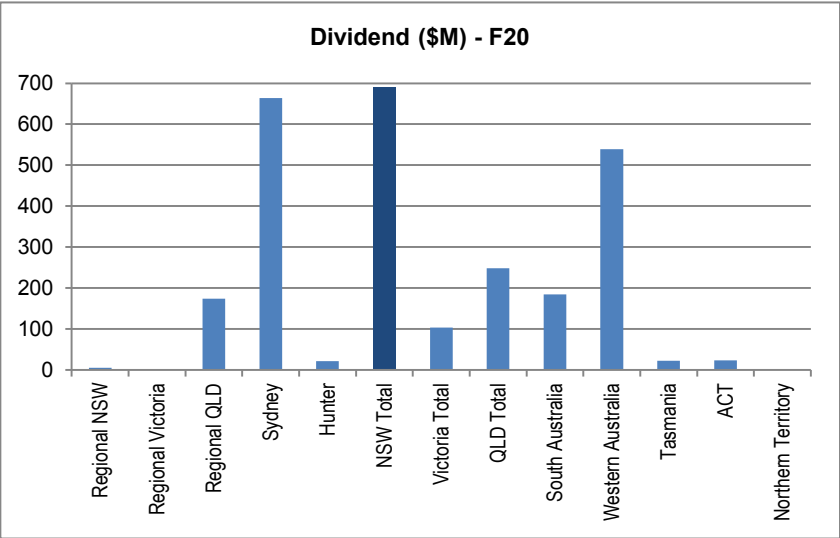
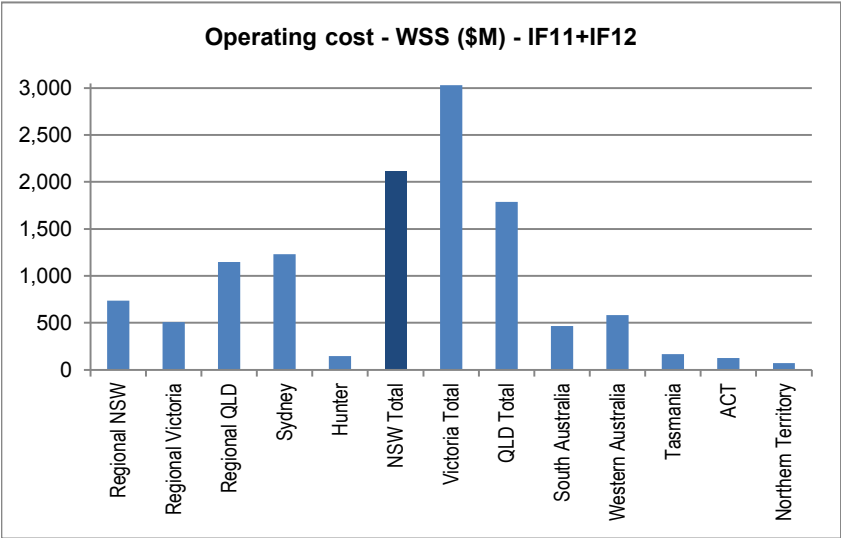
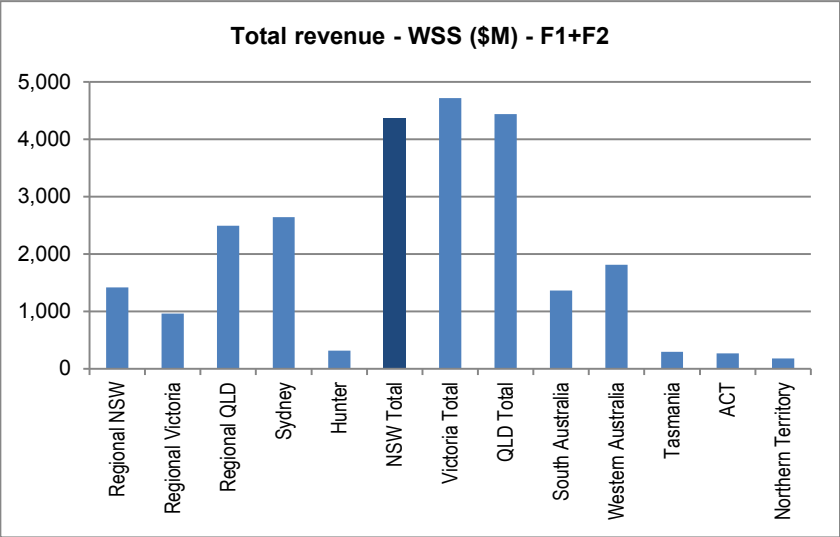
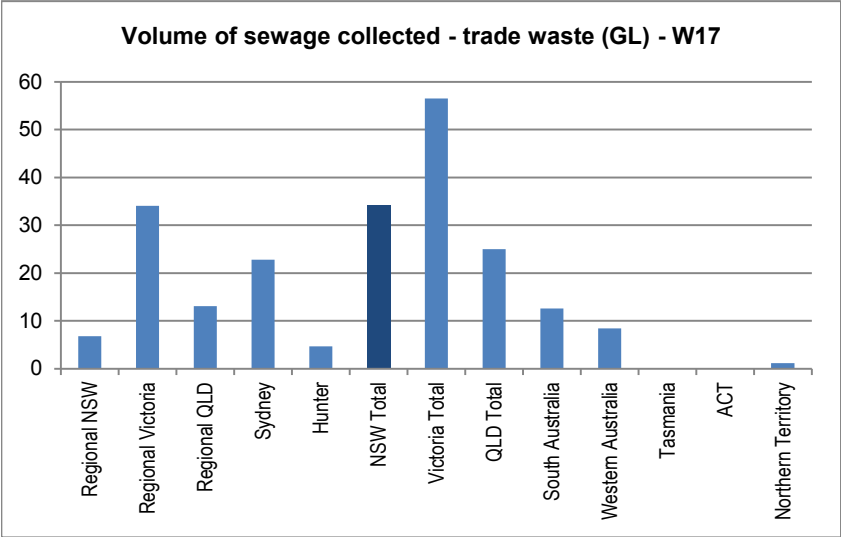
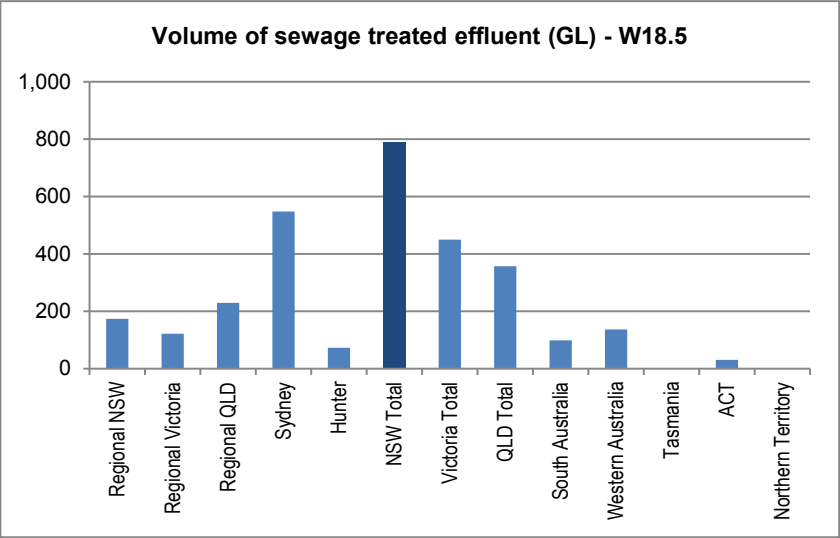
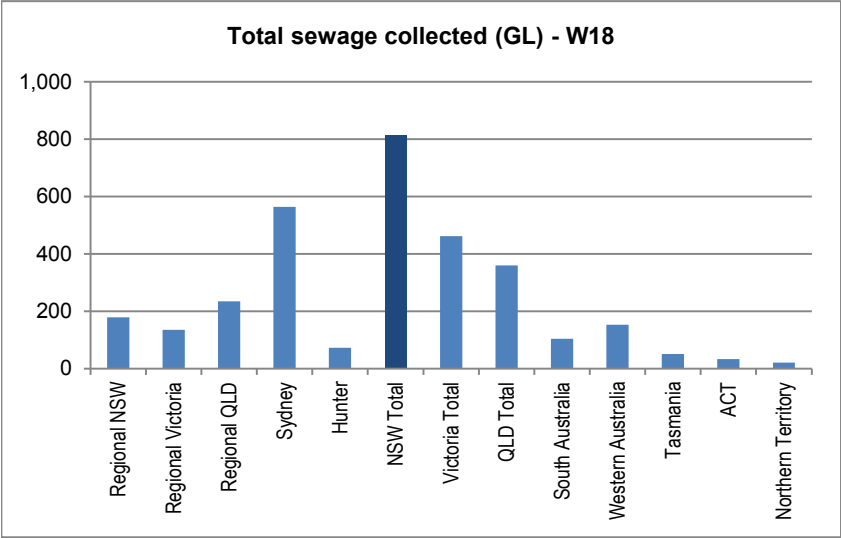
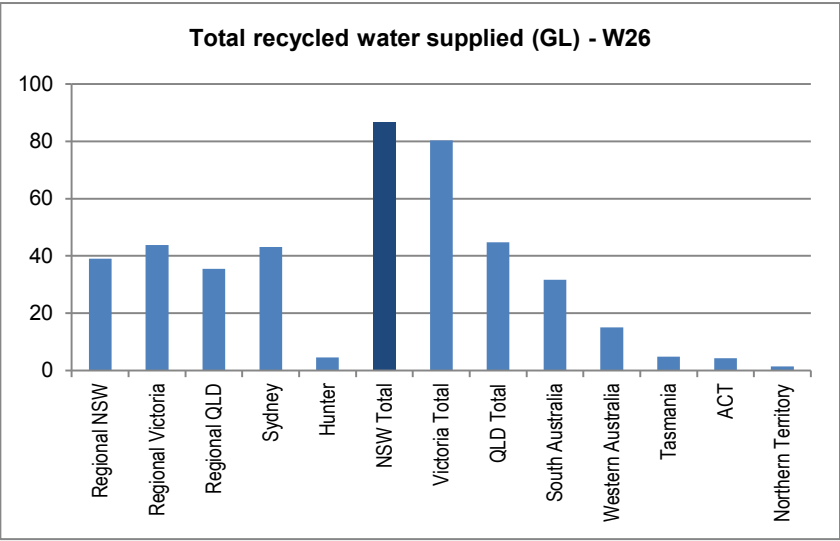
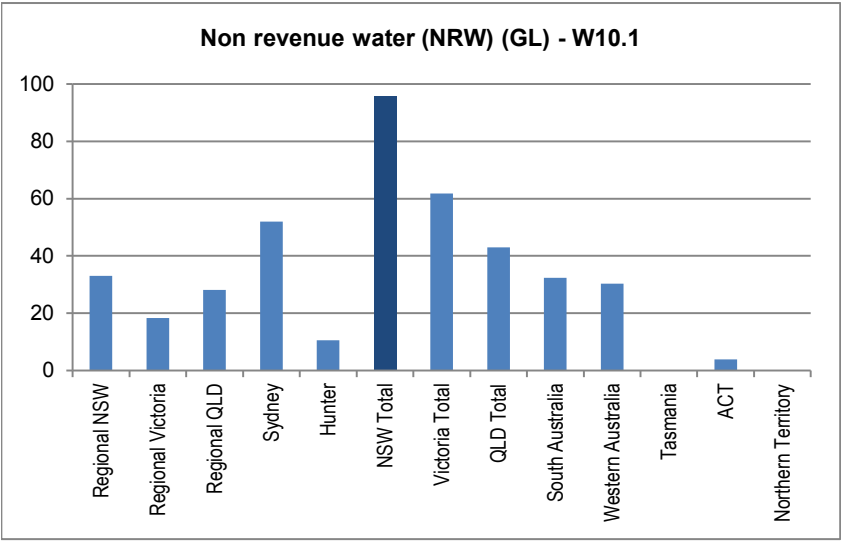


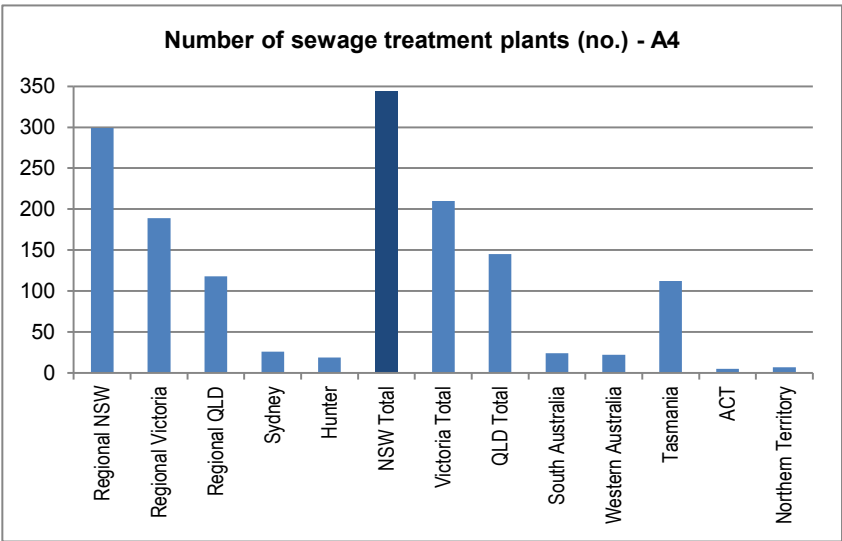
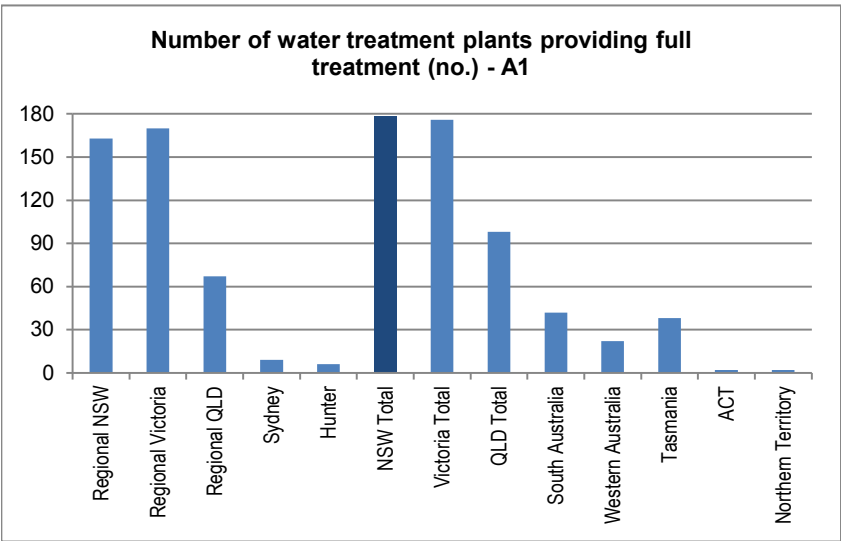
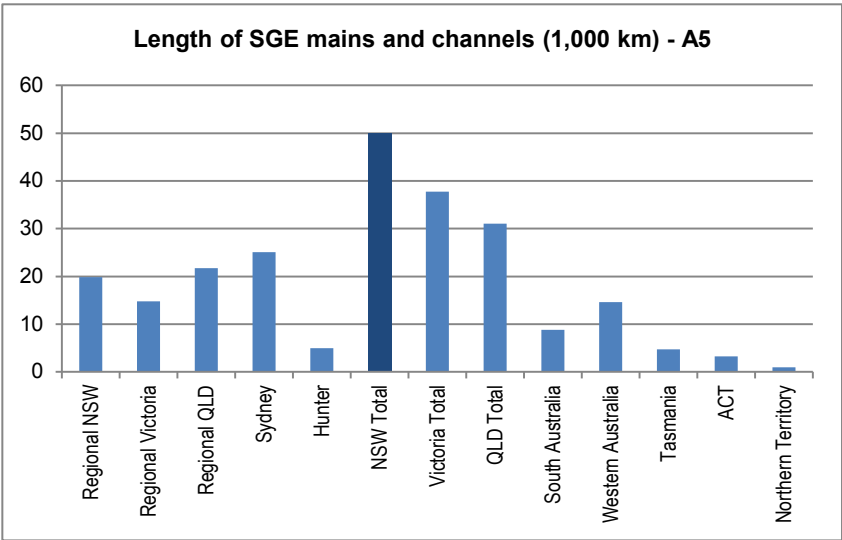
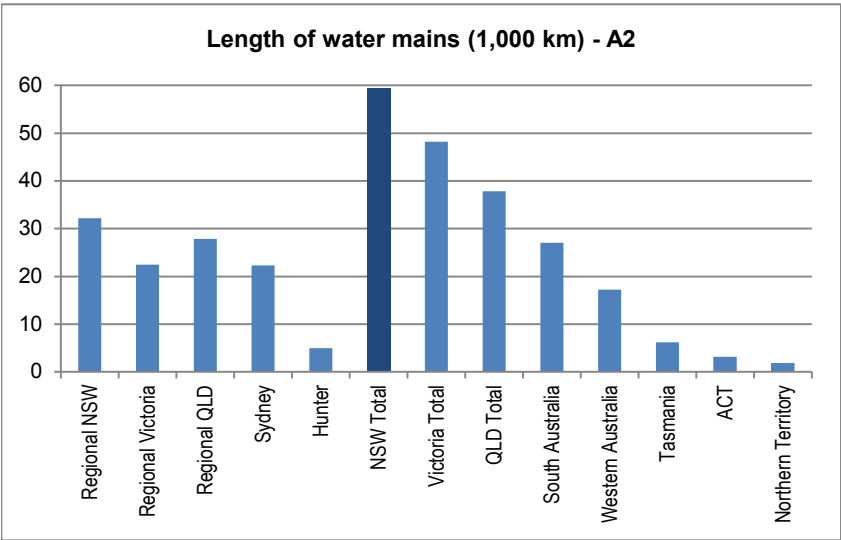
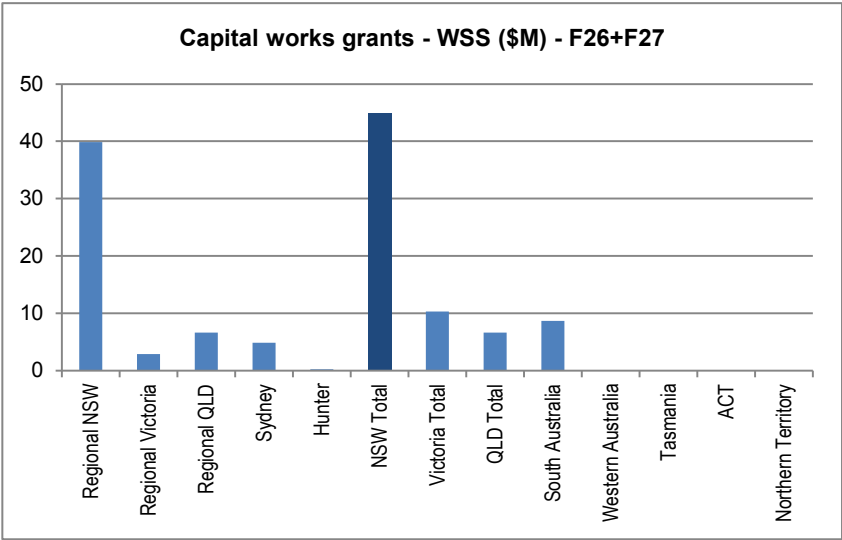
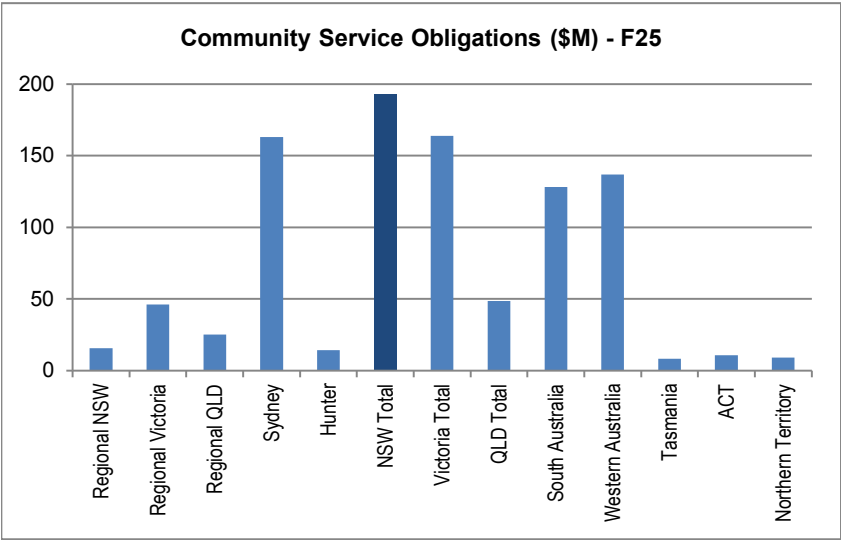
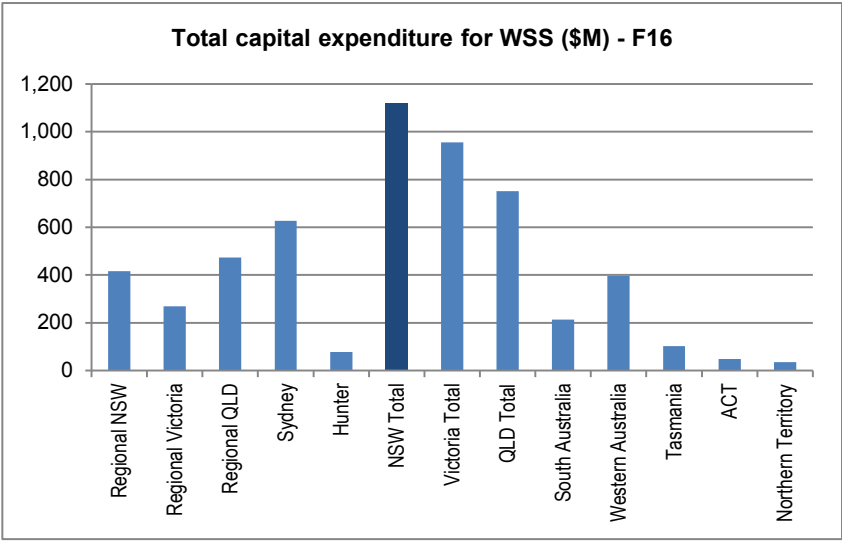
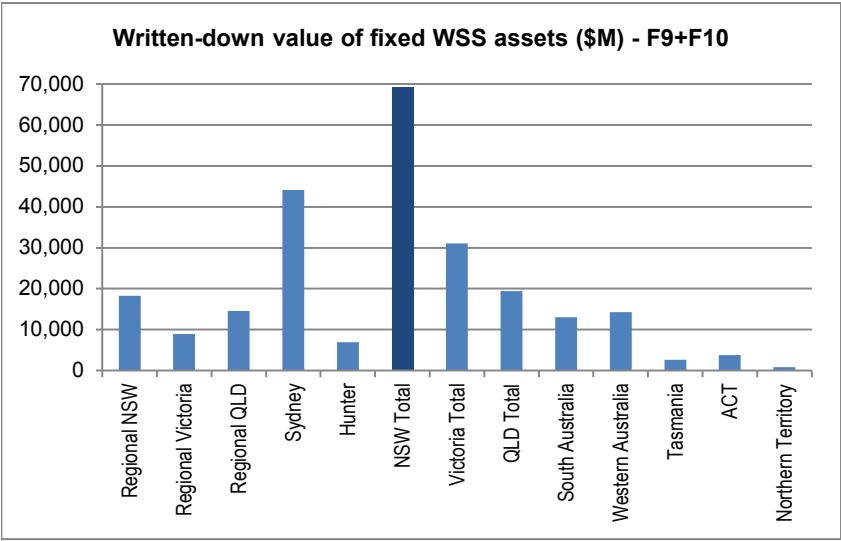
Total volume of potable water produced (GL) - W11.3



Volume of potable water supplied - residential and non-residential (GL) - W8.1+W9.1









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## Note:

Page numbers shown in:

**black bold** are the main reference to each topic;

**blue bold** refer to figures comparing the performance of the **NSW utilities**; and

**red bold** refer to graphs of **Interstate performance comparisons**.

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