

24 May 2024

This Blue-green algal (BGA) alert report is based on routine monitoring at sites in the Murrumbidgee Algae Reporting Area. The sites are monitored by WaterNSW and local councils. Satellite imagery may be used to supplement the monitoring data.

Summary

An **amber** alert for blue-green algae is current for Yanga Lake at the Regatta Beach.

Lake Albert is on **amber** alert for blue-green algae. More information can be obtained from the following link: [Lake Albert - Wagga City Council](#)

Lake Wyangan North has an **amber** alert status for blue green algae. For more information select the following link: [Griffith City Council](#)

Burrinjuck Dam at Goodhope and downstream of the dam wall are on **green** alert for blue-green algae.

Satellite images are shown on page 3 of this report.

A seven-day weather forecast together with the blue-green algal outlook is available on page 5.

Results Table

Table 1: Current blue-green algal alerts in the catchment of the Murrumbidgee River.

| Site | Description | Latest Sample Date | Cyanobacteria Total Count (cells/mL) | Cyanobacteria Biovolume (mm ³ /L) | Potentially Toxic Cyanobacterial Count (cells/mL) | Potentially Toxic Cyanobacterial Biovolume (mm ³ /L) | Current Status (based on Latest Sample) | Previous Status | Cyanobacteria dominant potentially toxic taxa | Comments |
|--------------------------|---|--------------------|--------------------------------------|--|---|---|---|-----------------|---|----------------------------------|
| N1017 | Murrumbidgee River at Mittagang Crossing (Cooma) | 7/05/2024 | 0 | 0.000 | 0 | 0.000 | No Alert | No Alert | | |
| Burrinjuck Dam | | | | | | | | | | |
| DBRJ12 | Burrinjuck Goodhope | 14/05/2024 | 34,145 | 0.093 | 3,185 | 0.081 | GREEN | AMBER | <i>Microcystis</i> sp. | Potentially toxic, taste & odour |
| DBRJ11 | Burrinjuck Woolgarlo | 14/05/2024 | 7,989 | 0.036 | 1,123 | 0.028 | No Alert | No Alert | <i>Microcystis</i> sp. | Potentially toxic, taste & odour |
| DBRJ10 | Burrinjuck Waters State Park | 14/05/2024 | 6,396 | 0.007 | 204 | 0.005 | No Alert | No Alert | <i>Microcystis</i> sp. | Potentially toxic, taste & odour |
| DBRJ09 | Burrinjuck Station 1 (Dam Wall) | 14/05/2024 | 5,838 | 0.007 | 0 | 0.000 | No Alert | No Alert | | |
| DBRJ01 | Burrinjuck Downstream | 14/05/2024 | 3,919 | 0.045 | 544 | 0.013 | GREEN | No Alert | <i>Microcystis</i> sp. | Potentially toxic, taste & odour |
| Blowering Dam | | | | | | | | | | |
| DBLO01 | Blowering Station 1 (Dam Wall) | 7/05/2024 | 4,559 | 0.001 | 0 | 0.000 | No Alert | No Alert | | |
| DBLO02 | Blowering Downstream | 7/05/2024 | 0 | 0.000 | 0 | 0.000 | No Alert | No Alert | | |
| N1014 | Murrumbidgee River at Gundagai | 6/05/2024 | 749 | 0.001 | 0 | 0.000 | No Alert | No Alert | | |
| N1059 | Murrumbidgee River D/S Wagga Wagga (Roaches Road) | 1/05/2024 | 0 | 0.000 | 0 | 0.000 | No Alert | No Alert | | |
| N1019 | Murrumbidgee River at Gogeldrie Weir | 30/04/2024 | 0 | 0.000 | 0 | 0.000 | No Alert | No Alert | | |
| N1018 | Murrumbidgee River at Carrathool | 8/04/2024 | 2,382 | 0.001 | 0 | 0.000 | No Alert | No Alert | | |
| N1056 | Murrumbidgee River at Hay weir Buoy | 22/05/2024 | 4,845 | 0.005 | 0 | 0.000 | No Alert | No Alert | | |
| N1058 | Murrumbidgee River at Maude Weir Buoy | 22/05/2024 | 6,940 | 0.013 | 0 | 0.000 | No Alert | GREEN | | |
| N1057 | Murrumbidgee River at Redbank Weir Buoy | 22/05/2024 | 1,089 | 0.000 | 0 | 0.000 | No Alert | AMBER | | |
| Additional Alerts | | | | | | | | | | |
| N1344 | Yanga Lake at Regatta Beach | 21/05/2024 | 675,853 | 1.248 | 596 | 0.075 | AMBER | AMBER | <i>Anabaenopsis</i> sp. | Potentially toxic |

Satellite imagery

The key to the approximate total algae (blue green and non-blue green) concentrations using the Custom Algae Script can be found Table 1. The actual values can potentially vary by a significant margin due to the geology of the waterbody, species of algae, turbidity, aquatic plants, time of day of the image capture, aerosols in the atmosphere, etc. This variability is a result of the nature of satellite imagery being a large-scale remote sensing format and is not function of the technology or the script itself. For this reason, these colours and descriptors are not the official “**Algae Alert Level**” but rather provides information on the **potential risk on algae formation**.

Table 1: Observed risk levels based on the estimated photosynthetic activity for Custom Algae Script

| Map Colour | Risk Level | Starting concentration guide range | RACC recreational alert values approx. equivalence |
|------------|------------|------------------------------------|--|
| Blue | Very low | <0.05 mm ³ /L | No Alert |
| Green | Low | 0.05 to 0.5 mm ³ /L | Green |
| Yellow | Medium | 0.5 to 5.0 mm ³ /L | Amber |
| Red | High | 5.0 to 20.0 mm ³ /L | Red |
| Dark red | Extreme | > 20 mm ³ /L | Red |

Observations about the satellite images (Figures 1 to 3)

Figure 1 indicates that Burrinjuck Dam had mostly very low phytoplankton activity on 28/05/2024. Some low to medium phytoplankton activity was present in the Murrumbidgee arm towards the inflow.

The latest satellite image of Blowering Dam on 28/05/2024 (Figure 2) shows very low-level phytoplankton activity.

Figure 3 indicates that Yanga Lake had very low to low phytoplankton activity on 29/05/2024.

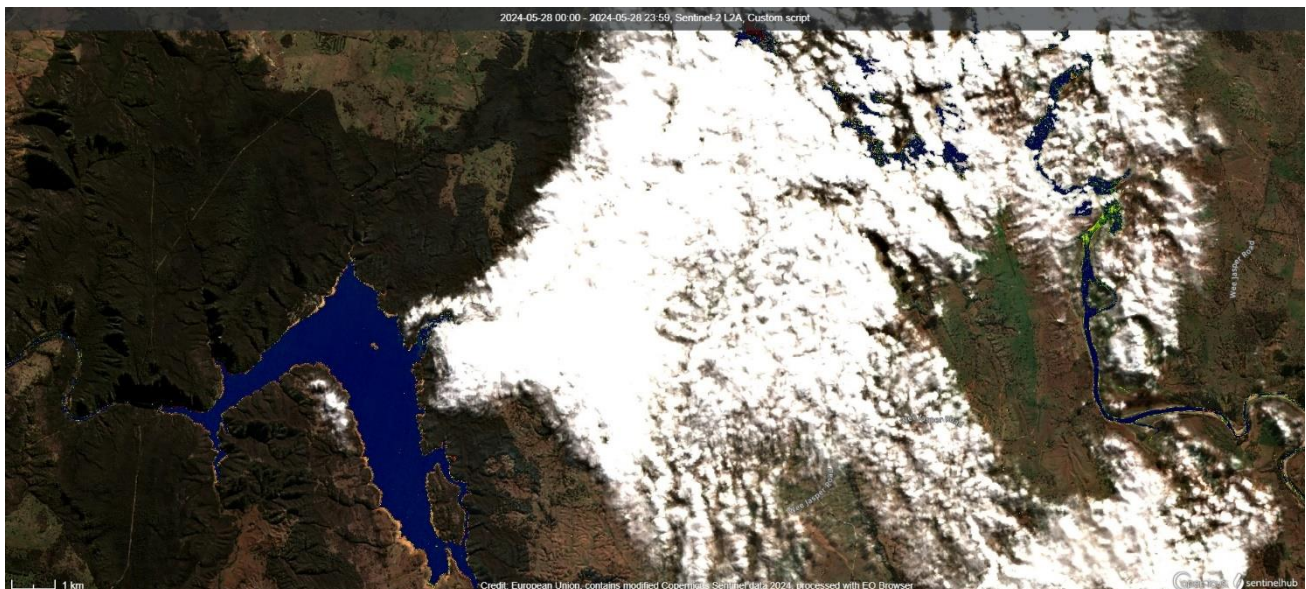


Figure 1: Burrinjuck Dam 28/05/2024 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW

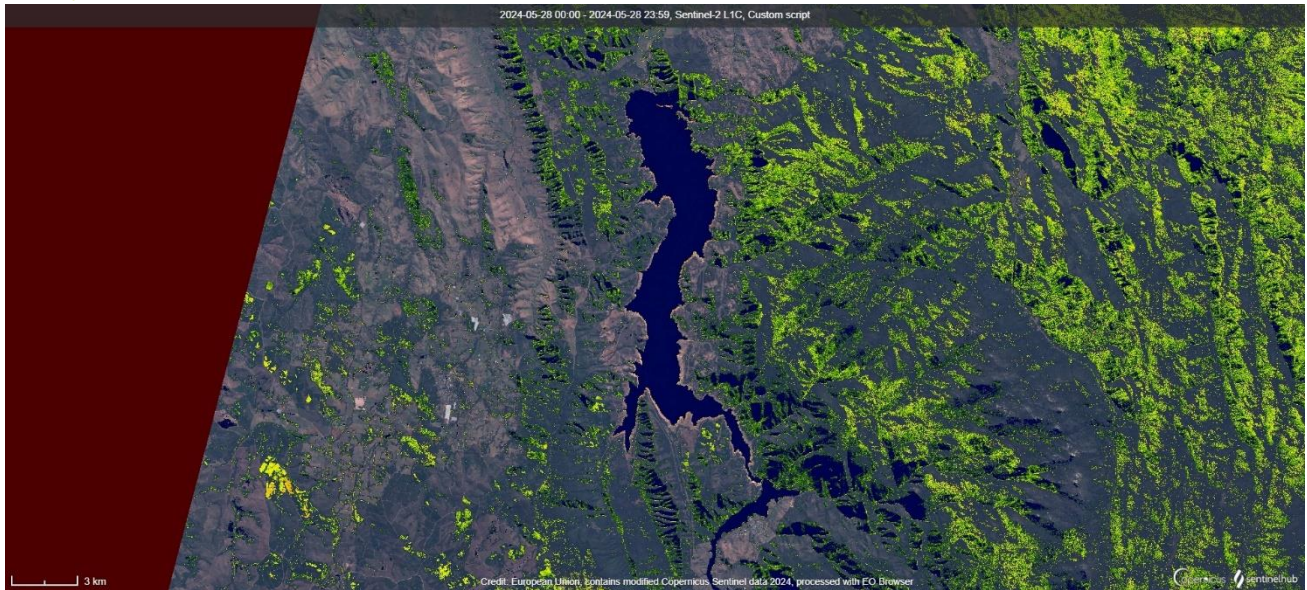









Figure 2: Blowering Dam 28/05/2024 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.










Figure 3: Yanga Lake 29/05/2024 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW

Weather forecast and blue-green algal outlook.

Yass and Balranald, [BOM 7-day weather forecast](#)

| Yass | | | | | | | |
|---|---|---|---|---|---|---|---|
| Forecast updated at 9:47 am EST on Friday 31 May 2024. Detailed Yass Forecast | | | | | | | |
| | Fri. 31 May | Sat. 1 Jun | Sun. 2 Jun | Mon. 3 Jun | Tue. 4 Jun | Wed. 5 Jun | Thu. 6 Jun |
| |  Rain clearing. |  Partly cloudy. |  Shower or two. |  Shower or two. |  Shower or two. |  Shower or two. |  Showers. |
| Max. Temperature | 16 °C | 15 °C | 14 °C | 13 °C | 13 °C | 12 °C | 13 °C |
| Min. Temperature | | 2 °C | 5 °C | 4 °C | 5 °C | 3 °C | 2 °C |

| Balranald | | | | | | | |
|--|--|---|---|---|--|---|---|
| Forecast updated at 9:47 am EST on Friday 31 May 2024. Detailed Balranald Forecast | | | | | | | |
| | Fri. 31 May | Sat. 1 Jun | Sun. 2 Jun | Mon. 3 Jun | Tue. 4 Jun | Wed. 5 Jun | Thu. 6 Jun |
| |  Mostly sunny. |  Possible morning shower. |  Sunny. |  Partly cloudy. |  Cloudy. |  Shower or two. |  Possible shower. |
| Max. Temperature | 19 °C | 17 °C | 17 °C | 17 °C | 15 °C | 15 °C | 17 °C |
| Min. Temperature | | 5 °C | 3 °C | 3 °C | 5 °C | 5 °C | 6 °C |

Blue-green algal outlook

In the upper reaches of the catchment near Yass, partly cloudy and showery days are expected. Cool maximum air temperatures combined with low minimum air temperatures are likely to create less favourable conditions for blue-green algal growth.

The mild, partly cloudy, and sunny days, in combination with low minimum air temperatures at Balranald, are expected to give rise to less favourable conditions for blue-green algae.

Alert Definitions for Recreational Waters

Alert Definitions as specified in The National Health and Medical Research Council (NHMRC) *Guidelines for Managing Risks in Recreational Water* 2008.

The interim use of these guidelines is endorsed by the Scientific Subcommittee of the NSW Algal Advisory Group.

RED ALERT

These alert levels represent 'bloom' conditions. Water will appear green or discoloured and clumps or scums could be visible. It can also give off a strong musty or organic odour.

Algae may be toxic to humans and animals. Contact with or use of water from red alert areas should be avoided due to the risk of eye and skin irritation. Drinking untreated or boiled water from these supplies can cause stomach upsets. Alternative water supplies should be sought or activated carbon treatment employed to remove toxins. People should not fish when an algal scum is present. Owners should keep dogs away from high alert areas and provide alternative watering points for stock.

AMBER ALERT

Blue-green algae may be multiplying, and the water may have a green tinge and musty or organic taste and odour. The water should be considered as unsuitable for potable use and alternative supplies or prior treatment of raw water for domestic purposes should be considered. The water may also be unsuitable for stock watering. Generally suitable for

water sports, however people are advised to exercise caution in these areas, as blue-green algal concentrations can rise to red alert levels quickly under warm, calm weather conditions.

GREEN ALERT

Blue-green algae occur naturally at low numbers. At these concentrations, algae would not normally be visible, however some species may affect taste and odour of water even at low numbers and does not pose any problems for recreational, stock or household use.

Key to Alerts for Recreational Waters

| | |
|---|--|
| <p>RED Alert</p> <p>≥ 50 000 cells/mL toxic <i>M. aeruginosa</i> OR biovolume equivalent of ≥4 mm³/L for the combined total of all cyanobacteria where a known toxin producer is dominant OR The total biovolume of all cyanobacteria exceeds 10 mm³/L OR Cyanobacterial blooms are consistently present</p> | <ul style="list-style-type: none"> • High levels of Blue Green Algae detected • Indicates “bloom” conditions • Toxicity should be presumed • Water will appear green or brownish and may have a strong musty taste and odour • Surface scums could occur • Extreme care should be exercised, and contact with the water should be avoided <p>Action</p> <ul style="list-style-type: none"> • Issue Media Release • Water supply authorities to increase filtering with activated carbon as appropriate • Local authority and health authorities to warn the public that the water body is unsuitable for primary contact recreation |
| <p>AMBER Alert</p> <p>≥5000 to <50 000 cells/mL <i>M. aeruginosa</i> OR biovolume equivalent of ≥ 0.4 to < 4 mm³/L for the combined total of all cyanobacteria OR ≥ 0.4 to < 10mm³/L combined total for all blue-green algae where known toxin producers are not dominant</p> | <ul style="list-style-type: none"> • Indicates blue-green algae are multiplying • Water may have a green tinge and musty taste and odour <p>Action</p> <ul style="list-style-type: none"> • Water supply authorities to consider filtering with activated carbon • Investigations into the causes of the elevated levels and increased sampling to enable the risks to recreational users to be more accurately assessed. |
| <p>GREEN Alert</p> <p>> 500 to < 5000 cells/mL <i>M. aeruginosa</i> OR biovolume equivalent of > 0.04 to < 0.4 mm³/L for the combined total of all cyanobacteria</p> | <ul style="list-style-type: none"> • Low levels of potentially toxic species detected – suggesting base crop of blue green algae may be on the increase <p>Action</p> <ul style="list-style-type: none"> • Continue/increase routine sampling to measure cyanobacterial levels |

Livestock Drinking Water Guidelines Based on ARMCANZ (2000), Orr and Schneider (2006) and WQRA (2010)

This guideline should be used when water is used for livestock drinking water purposes.

- If visual scums are present, then a High alert should be declared. This would be applicable for both farm dams and publicly managed water bodies (streams, rivers, etc). Such advice should also be given to farmers who phone the department seeking information on managing blooms in their dams.
- Where blooms dominated by *Microcystis aeruginosa* are present, then the ANZECC/ARMCANZ (2000) guideline of 11,500 cells/mL should be used. Excess of this cell count will constitute a **High alert**.
- Where blooms dominated by *Dolichospermum circinale* are present, then the Orr and Schneider (2006) guideline of 25,000 cells/mL should be used. Excess of this cell count will constitute a **High alert**.

Blooms of blue-green algae other than *M. aeruginosa* and *D. circinale* are also common in NSW. These can be of either known potentially toxic species, or of species not considered to be toxin producers. When these blooms are present, a total blue-green algal biovolume in excess of 6 mm³/L will constitute a **High alert**. (These are based on Very High alert recommendations for raw water sourced for potable human supply published by WQRA (2010), in lieu of there being nothing else available).

Further Information and Contacts

Select the links below to the WaterNSW and Department of Primary Industries Algal Websites

www.watarnsw.com.au/algae

[DPI blue-green-algae](#)

For more information on water quality and flows in the Murrumbidgee Catchment

<https://waterinsights.watarnsw.com.au/11982-murrumbidgee-regulated-river/updates>

Contacts

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