

Lachlan Region - Algae Alert Status

13 February 2025

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

Red Alerts

- Lake Cargelligo Town Water Supply
- Lake Cargelligo Boatshed
- Lake Cargelligo Outlet at Lake Creek
- Lake Brewster Regulator C

Amber Alerts

- Carcoar Dam Wall (Station 1)
- Lake Cargelligo Weir
- Lachlan River downstream of Lake Cargelligo Weir
- Lake Cargelligo intake downstream of Curlew Waters
- Lake Brewster Inflow
- Lake Brewster Outlet Channel
- Lachlan River at Willandra Weir
- Lachlan River at Hillston
- Lachlan River at Corrong

Green Alerts

- Wyangala Junction (Lachlan & Ambercrombie)
- Wyangala Junction (Lachlan & Sandy Ck)
- Wyangala Abercrombie River
- Wyangala Inland Waters Park
- Wyangala Dam Wall (Station 1)
- Lachlan River at Booligal

General Comments: Lake Cargelligo and Lake Brewster remain on Red Alert. Lake Cargelligo's town water drinking supply is being drawn from bores and is not impacted by this alert.

Where Red Alerts are raised, contact with or use of water should be avoided, and recreational restrictions apply. People, pets and livestock should avoid consuming untreated water from this waterbody. Further details can be found from page 6, or on the [Algae Alerts](#) webpage.

Weather Forecast: For the remainder of February, rainfall is likely to be within typical range. Maximum temperatures are also likely to be within typical range, and minimum temperatures have a near equal likelihood of exceeding the average across the region. (Source: [Bureau of Meteorology \(BoM\)](#))

Algae Outlook: The current risk for algal growth is very high, with the hot summer conditions continuing to create favourable conditions for algal growth, particularly where waters are shallow or stagnant.

Satellite image observations start on page 3 of this report.

Results Table

Table 1: Current blue-green algal alerts in the catchment of the Lachlan 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 toxic taxa	Comments on Dominant Potentially Toxic Cyanobacteria Taxa
Wyangala Dam										
DWYA01	Wyangala Junction Lachlan & Abercrombie	4/02/2025	117,984	0.075	980	0.025	GREEN	No Alert	<i>Microcystis sp.</i>	Potentially toxic, taste & odour
DWYA02	Wyangala Junction Lachlan & Sandy Ck	4/02/2025	91,076	0.118	3,001	0.076	GREEN	GREEN	<i>Microcystis sp.</i>	Potentially toxic, taste & odour
DWYA05	Wyangala Abercrombie R	4/02/2025	184,803	0.313	153	0.018	GREEN	GREEN	<i>Aphanizomenonaceae sp.</i>	Potentially toxic, taste & odour
DWYA06	Wyangala Inland Waters Park	4/02/2025	106,247	0.049	204	0.005	GREEN	No Alert	<i>Microcystis sp.</i>	Potentially toxic, taste & odour
DWYA08	Wyangala Dam Wall Station 1	4/02/2025	92,767	0.049	204	0.005	GREEN	GREEN	<i>Microcystis sp.</i>	Potentially toxic, taste & odour
DWYA04	Wyangala Dam Downstream	4/02/2025	3,389	0.009	327	0.007	No Alert	No Alert	<i>Microcystis sp.</i>	Potentially toxic, taste & odour
N1168	Lachlan River at Cowra	15/01/2025	0	0.000	0	0.000	No Alert	GREEN		
Carcoar Dam										
DCAR01	Carcoar Dam Station 1 (Dam Wall)	4/02/2025	10,812	1.391	2,243	0.271	AMBER	GREEN	<i>Dolichospermum circinale</i>	Potentially toxic, taste & odour
DCAR02	Carcoar Downstream (Belubula River)	4/02/2025	0	0.000	0	0.000	No Alert	No Alert		
N1022	Lachlan River at Cottons Weir (Forbes)	16/01/2025	0	0.000	0	0.000	No Alert	No Alert		
N1024	Lachlan River @ Condobolin Bridge	16/01/2025	6,532	0.006	0	0.000	No Alert	No Alert		
Lake Cargelligo										
DCRG04	Lake Cargelligo Weir	3/02/2025	13,837	4.153	1,122	0.023	AMBER	No Alert	<i>Phormidium sp.</i>	Potentially toxic, taste & odour
DCRG06	Lachlan River downstream of Lake Cargelligo Weir	3/02/2025	4,878	0.758	3,109	0.757	AMBER	No Alert	<i>Phormidium sp.</i>	Potentially toxic, taste & odour
DCRG05	Lake Cargelligo intake downstream of Curlew Waters	3/02/2025	185,801	0.492	598	0.087	AMBER	GREEN	<i>Anabaenopsis sp.</i>	Potentially toxic
DCRG02	Lake Cargelligo Town Water Supply 41210042	3/02/2025	1,949,405	20.156	5,080	0.295	RED	RED	<i>Raphidiopsis raciborskii</i>	Potentially toxic, taste & odour
DCRG03	Lake Cargelligo Boatshed	3/02/2025	1,685,230	10.812	9,227	0.639	RED	AMBER	<i>Raphidiopsis raciborskii</i>	Potentially toxic, taste & odour
DCRG01	Lake Cargelligo Outlet @ Lake Creek	3/02/2025	1,974,604	11.290	3,806	0.203	RED	AMBER	<i>Phormidium/Planktothrix sp.</i>	Potentially toxic
Lake Brewster										
DBRW01	Lake Brewster Inflow 412102	3/02/2025	208,497	2.182	3,706	0.335	AMBER	AMBER	<i>Dolichospermum sp.</i>	Potentially toxic, taste & odour
DBRW03	Lake Brewster Regulator C	3/02/2025	2,957,143	7.140	5,350	0.345	RED	RED	<i>Raphidiopsis raciborskii</i>	Potentially toxic, taste & odour
DBRW04	Lake Brewster Outlet Channel 412108	3/02/2025	918,362	2.469	1,971	0.112	AMBER	RED	<i>Raphidiopsis raciborskii</i>	Potentially toxic, taste & odour
DLOS06	Lachlan River @ Willandra Weir	3/02/2025	88,473	0.538	289	0.025	AMBER	GREEN	<i>Anabaenopsis sp.</i>	Potentially toxic
N1025	Lachlan River at Hillston	29/01/2025	1,019,872	1.408	970	0.129	AMBER	AMBER	<i>Anabaenopsis sp.</i>	Potentially toxic
N1023	Lachlan River at Booligal	29/01/2025	65,950	0.086	0	0.000	GREEN	GREEN		
N1026	Lachlan River at Corrong	29/01/2025	1,236,769	1.289	0	0.000	AMBER	AMBER		

Satellite Imagery

The key to the algae approximate concentrations using the Custom Algae (CA) Script is to provide a starting reference only (Table 2). 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. Therefore, these colours and descriptors are not the official “Algae Alert Level” but rather provides information on the **potential risk on algae formation**.

Table 2: Observed risk levels based on probable chlorophyll-a concentration 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

Note: Satellite images are usually more recent than the sampling data and therefore may contribute to not agreeing with sampled algae results. So please check dates when comparing.

Satellite Image Observations (Figures 1 through 4)

This week’s satellite images have been blocked by cloud cover. The most recent clear images are provided below.

Wyangala Dam: Mostly very low levels of phytoplankton activity were indicated by the satellite imagery on the 7th of February (Figure 1).

Carcoar Dam: Primarily very low levels of algal activity were indicated across the dam on the 7th of February (Figure 2).

Lake Cargelligo: The satellite imagery indicated strong medium levels of algal activity across the lake on the 5th of February (Figure 3).

Lake Brewster: Mostly medium to low levels of algal activity were indicated on the 3rd of February, as shown in Figure 4.

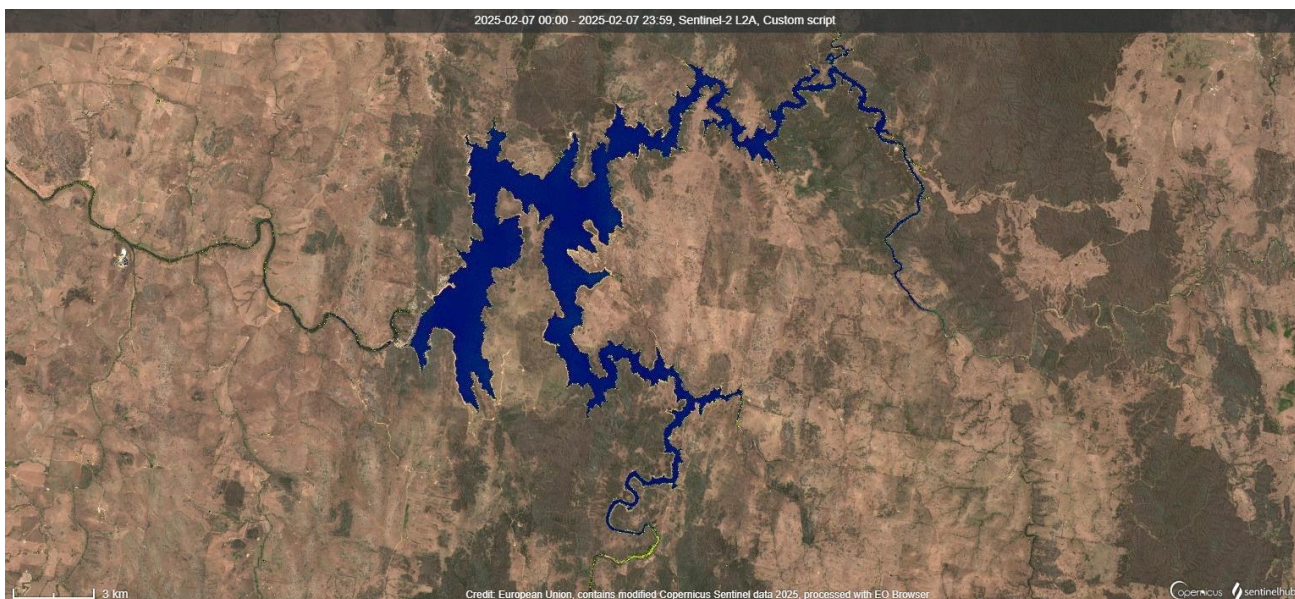


Figure 1. Wyangala Dam 7/2/2025 Sentinel Hub [CC BY-NC 4.0]NSW-Custom Algae Script - TF, WaterNSW

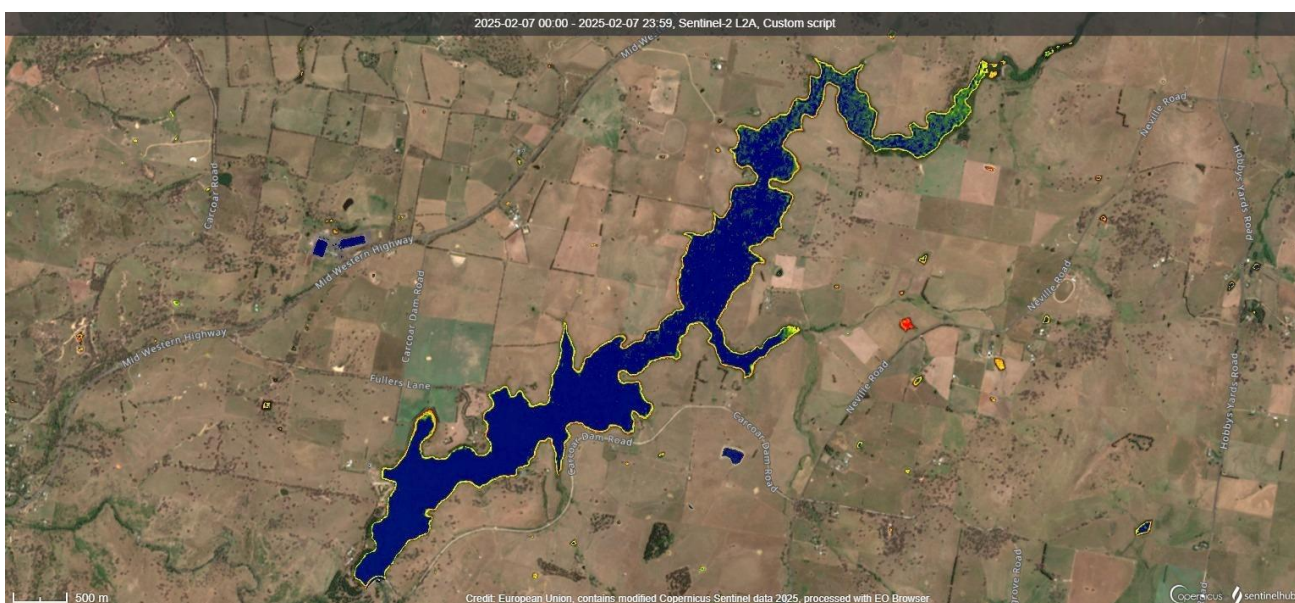


Figure 2. Carcoar Dam 7/2/2025 Sentinel Hub [CC BY-NC 4.0]NSW-Custom Algae Script - TF, WaterNSW

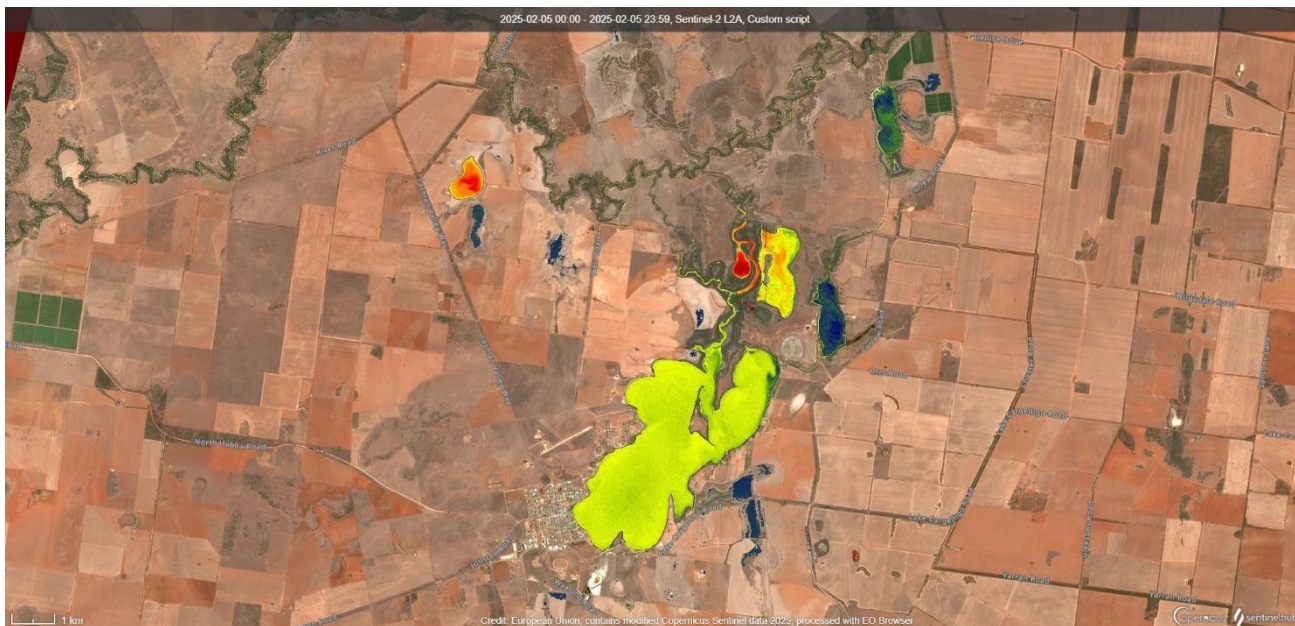


Figure 3. Lake Cargelligo 5/2/2025 Sentinel Hub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW



Figure 4. Lake Brewster 3/2/2025 Sentinel Hub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.

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>≥10 µg/L total microcystins OR ≥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 in the total biovolume. OR ≥10 mm³/L for total biovolume of all cyanobacterial material where known toxins are not present. OR cyanobacterial scums 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 where a known toxin producer is dominant in the total biovolume OR ≥0.4 to <10 mm³/L for the combined total of all cyanobacteria where known toxin producers are not present.</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.

*The definition of ‘dominant’ is where the known toxin producer comprises 75% or more of the total biovolume of cyanobacteria in a representative sample.

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

Water NSW Algal Websites

Algal Information: <http://www.waternsw.com.au/algae>

Water Insights (Lachlan Catchment): <https://waterinsights.waternsw.com.au/>

Algae Alerts NSW Map: <https://www.waternsw.com.au/water-services/water-quality/algae-alerts>

Department of Primary Industries Algal Websites

<https://www.dpi.nsw.gov.au/agriculture/water/quality/pubs-and-info/blue-green-algae>

BOM Websites

7 Day Forecasts: <http://www.bom.gov.au/nsw/forecasts/map7day.shtml>

BOM: <http://www.bom.gov.au/>

Contacts

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