Blue-green Algal Alerts for the Murrumbidgee Region

21 January 2021

This blue-green algal alert report is based on routine monitoring at sites in the Murrumbidgee Algae Reporting Area. The sites are monitored by WaterNSW and local councils.

Summary

Burrinjuck Dam at Goodhope is on **Red** alert for blue-green algae.

Lake Wyangan North has a **Red** status for blue green algae. For more information select the following link: https://www.griffith.nsw.gov.au/projects/project.asp?id=6896

Burrinjuck Dam at Woolgarlo, Waters State Park and at the Dam Wall are on **Amber** alert for blue-green algae. The Murrumbidgee River at Redbank Weir Buoy and Balranald are on **Amber** alert.

Lake Albert in Wagga Wagga is on **Amber** alert for blue-green algae. More information can be obtained from the following link: Lake Albert - Wagga City Council

Lake Wyangan South in Griffith has an **Amber** status for blue green algae. For more information select the following link: https://www.mirrigation.com.au/Environment/Water-Quality

Blowering Dam at the dam wall as well as downstream are on **Green** alert for blue-green algae. The Murrumbidgee River at Hay Weir Buoy and Maude Weir Buoy are on **Green** alert.

Lake Albert in Wagga Wagga is on **Amber** alert for blue-green algae. More information can be obtained from the following link: Lake Albert - Wagga City Council

There are no other blue-green algal alerts.

Outlook: Next seven days in Hay- Mostly sunny with maximum air temperatures between 35 and 45 °C and low chance of rain from Monday to Wednesday.
Source of information http://www.bom.gov.au/nsw/forecasts/hay.shtml
Good weather for promoting phytoplankton activity.

These alert levels apply to **non-consumptive or recreational contact**. Drinking water safety thresholds are much more stringent.

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Results Table

Site	Description	Latest Sample Date	Cyanobacteria Total Count (cells/mL)	Cyanobacteria Biovolume (mm3/L)	Potentially Toxic Cyanobacterial Count (cells/mL)	Potentially Toxic Cyanobacterial Biovolume (mm3/L)	Current Status (based on Latest Sample)	Previous Status	Cyanobacteria dominant potentially toxic taxa	Comments
N1017	Murrumbidgee River at Mittagang Crossing (Cooma)	5/01/2021	1,730	0.008	0	0.000	No Alert	No Alert	*No toxic species*	
	Burrinjuck Dam									
DBRJ12	Burrinjuck Goodhope	12/01/2021	75,070	6.786	46,050	6.745	RED	RED	*Dolichospermum circinale*	Potentially toxic, taste & odour
DBRJ11	Burrinjuck Woolgarlo	12/01/2021	40,670	0.872	28,180	0.865	AMBER	AMBER	*Microcystis Unknown*	Potentially toxic, taste & odour
DBRJ10	Burrinjuck Waters State Park	12/01/2021	109,400	2.878	109,400	2.878	AMBER	AMBER	*Microcystis Unknown*	Potentially toxic, taste & odour
DBRJ09	Burrinjuck Station 1 (Dam Wall)	12/01/2021	145,500	3.852	145,000	3.844	AMBER	AMBER	*Microcystis Unknown*	Potentially toxic, taste & odour
DBRJ01	Burrinjuck Downstream	12/01/2021	2,350	0.005	0	0.000	No Alert	No Alert	*No toxic species*	
	Blowering Dam									
DBLO01	Blowering Station 1 (Dam Wall)	5/01/2021	14,320	0.345	0	0.337	GREEN	GREEN	*Radiocystis sp.*	Potentially toxic
DBLO02	Blowering Downstream	5/01/2021	6,910	0.213	0	0.213	GREEN	No Alert	*Radiocystis sp.*	Potentially toxic
N1014	Murrumbidgee River at Gundagai	4/01/2021	553	0.000	0	0.000	No Alert	No Alert	*No toxic species*	
N1059	Murrumbidgee River D/S Wagga Wagga (Roaches Road)	5/01/2021	691	0.001	0	0.000	No Alert	No Alert	*No toxic species*	
N1019	Murrumbidgee River at Gogeldrie Weir	15/12/2020	243	0.002	0	0.000	No Alert	No Alert	*No toxic species*	
N1018	Murrumbidgee River at Carrathool	16/12/2020	0	0.000	0	0.000	No Alert	No Alert	*No toxic species*	
N1056	Murrumbidgee River at Hay weir Buoy	4/01/2021	3,460	0.230	0	0.000	GREEN	No Alert	*Unknown*	
N1058	Murrumbidgee River at Maude weir Buoy	4/01/2021	79,340	0.088	0	0.000	GREEN	AMBER	*Unknown*	
N1057	Murrumbidgee River at Redbank weir Buoy	4/01/2021	12,810	2.560	0	0.000	AMBER	GREEN	*Unknown*	
N1061	Murrumbidgee River at Balranald	4/01/2021	10,280	1.958	0	0.102	AMBER	No Alert	*Radiocystis sp.*	Potentially toxic

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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

RED Alert ≥ 50 000 cells/mL toxic *M. aeruginosa* OR biovolume equivalent of ≥4 mm^3/L for the combined total of all cyanobacteria where a known toxin producer is dominant OR The total biovolume of all cyanobacteria exceeds 10 mm^3/L OR Cyanobacterial blooms are consistently present	• 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** **Action** • 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 considered to be unsuitable for primary contact recreation
AMBER Alert ≥5000 to <50 000 cells/mL *M. aeruginosa* OR biovolume equivalent of ≥ 0.4 to < 4 mm^3/L for the combined total of all cyanobacteria	• Indicates blue-green algae are multiplying • Water may have a green tinge and musty taste and odour **Action** • 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.
GREEN Alert > 500 to < 5000 cells/mL *M. aeruginosa* OR biovolume equivalent of > 0.04 to < 0.4 mm^3/L for the combined total of all cyanobacteria	• Low levels of potentially toxic species detected – suggesting base crop of blue green algae may be on the increase **Action** • Continue/increase routine sampling to measure cyanobacterial levels

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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 mm^3/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

Go to the WaterNSW Algal Website

http://www.waternsw.com.au/water-quality/algae

Call

NSW algae hotline 1800 999 457

Contacts

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