Murray and Sunraysia – Algae Alert Status

2 May 2025

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

Table 1 shows the following red and amber, blue-green algal alerts:

Murray River
Hume Dam at Heywoods Bay and Hume Dam Resort are on **Amber** alert for blue-green algae. The Murray River downstream of Yarrawonga, Barham, Buronga, Merbein, Curlwaa, Fort Courage, Lock 8 and Lake Victoria outlet regulator are on **Amber** alert for blue-green algae.

Billabong Creek, Edward River & Wakool River
The Edward River at Deniliquin is on **Amber** alert for blue-green algae.

Menindee Lakes and lower Darling River
Lake Menindee and the lake Menindee outlet regulator are on Red alert for blue-green algae.

Lakes Tandure, Pamamaroo centre, Copi Hollow and Cawndilla outlet regulator are on **Amber** alert for blue-green algae. The Darling River upstream of Weir 32 as well as at Burtundy and Ellerslie are on **Amber** alert for blue-green algae. The Great Darling Anabranch at the Silver City Highway crossing is on **Amber** alert for blue-green algae.

Some satellite images are shown on page 4 of this report.

Blue-green algal outlook
In the upper reaches of the catchment near Albury, weather conditions over the next seven days are expected to be sunny for the first two days with partly cloudy conditions from Sunday to Thursday. Maximum day air temperatures will be between 21 °C and 26 °C with minimum temperatures ranging from 4 °C to 10 °C (Source -BOM 7-day weather forecast). These conditions are likely to create less favourable circumstances for blue-green algal growth.

At Menindee, days are forecast to be mostly sunny with some cloud cover on Sunday and Monday. Maximum day air temperatures are expected to be between 23 °C and 29 °C with minimum temperatures ranging from 8 °C to 13 °C. These environmental conditions are expected to create less favourable circumstances for blue-green algal growth.

Table 1: Combined Murray and Sunraysia Alerts

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	Cyanobacteria Comments
MURRAY RIVER SYSTEM										
	Corryong Supply - Raw Water Inlet to Corryong TP (NE Water)	28/04/2025	0	0.000	0	0.000	No Alert	No Alert		
	Manus Lake (SVC) Lake pontoon	31/03/2025					AMBER	AMBER		
DLH003	Lake Hume, Ebden	7/04/2025	97,693	0.179	3,341	0.100	GREEN	GREEN	*Radiocystis sp.*	Potentially toxic
DLH001	Lake Hume, Heywoods Bay nr Bethanga	7/04/2025	31,029	0.035	0	0.000	AMBER	AMBER		
DLH002	Lake Hume, Hume Dam Resort	7/04/2025	62,235	0.250	5,811	0.175	AMBER	AMBER	*Radiocystis sp.*	Potentially toxic
DLH004	Lake Hume, Dam Wall	7/04/2025	60,825	0.077	0	0.000	GREEN	GREEN		
N1000	Murray R. Union Bridge Albury	2/04/2025	73,701	0.068	347	0.008	GREEN	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
N1001	Murray R. Corowa	2/04/2025	88,675	0.252	3,229	0.166	GREEN	GREEN	*Umezakia ovalisporum*	Potentially toxic, taste & odour
	Yarrawonga Weir (outlet) GMW	1/04/2025	43,350	0.300	0	0.000	AMBER	AMBER		
N1008	Mulwala Canal Offtake	2/04/2025	325,892	0.387	1,393	0.130	GREEN	AMBER	*Dolichospermum sp.*	Potentially toxic, taste & odour
N1007	Murray R. @ below Yarrawonga	2/04/2025	173,478	0.703	1,796	0.080	AMBER	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
N1051	Murray R. Cobram (Barooga)	2/04/2025	110,729	0.268	476	0.015	GREEN	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
	Cobram WTP, raw water (GVW)	14/04/2025	7,100	0.147	1600	0.118	GREEN	GREEN	*Microcystis sp*	
N1013	Murray R. Tocumwal	2/04/2025	156,370	0.223	136	0.003	GREEN	AMBER	*Microcystis sp.*	Potentially toxic, taste & odour
N1052	Murray R. Picnic Point	31/03/2025	70,285	0.208	408	0.009	GREEN	AMBER	*Microcystis sp.*	Potentially toxic, taste & odour
	Barmah WTP raw water (GVW)	14/04/2025	89,602	0.836	1448	0.104	AMBER	AMBER	*Aphanizomenonaceae family – straight*	
N1050	Murray R. Moama (Echuca)	31/03/2025	51,098	0.302	0	0.000	GREEN	AMBER		
	Torrumbarry Weir GMW	7/04/2025	49,260	0.609	0.000	0.000	AMBER	AMBER		
N1003	Murray R. Barham (Koondrook)	1/04/2025	42,562	0.409	0	0.000	AMBER	AMBER		
N1054	Murray R. Murray Downs (Swan Hill)	1/04/2025	9,478	0.010	0	0.000	No Alert	GREEN		
	Murray River U/S Woorinen pumps GMW	14/04/2025	96,700	0.865	0	0.000	AMBER	AMBER		
N1055	Murray R. Tooleybuc (Piangil)	1/04/2025	135,492	0.171	0	0.000	GREEN	AMBER		
N1064	Lake Benanee Rec Area	2/04/2025	201,444	0.288	0	0.000	GREEN	GREEN		
N1028	Murray R. Euston (Robinvale)	1/04/2025	187,433	0.282	408	0.009	GREEN	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
N1065	Murray R. Mount Dispersion	2/04/2025	65,155	0.142	0	0.000	GREEN	AMBER		
N1062	Murray R. Buronga	31/03/2025	191,502	0.803	204	0.029	AMBER	AMBER	*Anabaenopsis sp.*	Potentially toxic
N1027	414206 - Murray River at Merbein	31/03/2025	251,469	0.819	425	0.039	AMBER	AMBER	*Dolichospermum sp.*	Potentially toxic, taste & odour
N1063	Murray R. Curlwaa	31/03/2025	188,623	0.507	986	0.129	AMBER	GREEN	*Anabaenopsis sp.*	Potentially toxic
N1066	Murray R. Fort Courage	31/03/2025	113,492	0.832	1,694	0.247	AMBER	AMBER	*Anabaenopsis sp.*	Potentially toxic
	Lock 9 (LMW)	11/03/2025	96,396	0.574	514	0.071	AMBER	AMBER	*Aphanizomenonaceae family - coiled (<6µm)*	
N1077	Murray R. Lock 8	31/03/2025	89,121	0.339	1,021	0.149	AMBER	AMBER	*Anabaenopsis sp.*	Potentially toxic
N1078	Lake Victoria Outlet Regulator	31/03/2025	224,404	1.410	9,159	0.572	AMBER	AMBER	*Raphidiopsis raciborskii*	Potentially toxic, taste & odour

Table 1: Continued

BILLBONG CREEK, EDWARD & WAKOOL RIVERS										
N1020	Billabong Ck. Walbundrie	2/04/2025	24,782	0.029	0	0.000	No Alert	GREEN		
N1015	Billabong Ck. Jerilderie	31/03/2025	11,690	0.021	0	0.000	No Alert	AMBER		
N1006	Gulpa Ck. Mathoura	31/03/2025	110,398	0.242	2,314	0.056	GREEN	AMBER	*Microcystis sp.*	Potentially toxic, taste & odour
N1002	Edward R Deniliquin	31/03/2025	112,242	0.823	0	0.000	AMBER	AMBER		
N1053	Edward R. Old Morago	1/04/2025	41,901	0.266	0	0.000	GREEN	AMBER		
N1005	Edward R. Moulamein	1/04/2025	41,420	0.137	2,518	0.077	GREEN	AMBER	*Radiocystis sp.*	Potentially toxic
N1010	Wakool R. Wakool-Barham Road	1/04/2025	146,110	0.208	0	0.000	GREEN	GREEN		
N1004	Wakool R. @ Stoney Crossing	1/04/2025	17,215	0.025	0	0.000	No Alert	No Alert		
N1009	Wakool R. Kyalite	1/04/2025	14,004	0.021	0	0.000	No Alert	GREEN		
MENINDEE LAKE SYSTEM & LOWER DARLING RIVER										
N1042	Darling River at Wilcannia	2/04/2025	2,177	0.001	0	0.000	No Alert	No Alert		
N1087	Lake Wetherell Site 1	10/03/2025	24,769	0.010	0	0.000	No Alert	No Alert		
N1088	Lake Wetherell Site 2	10/03/2025	11,976	0.003	0	0.000	No Alert	No Alert		
N1089	Lake Wetherell Site 3	10/03/2025	126,577	0.397	408	0.023	GREEN	No Alert	*Raphidiopsis raciborskii*	Potentially toxic, taste & odour
N1090	Lake Wetherell Site 4	10/03/2025	138,780	0.076	0	0.000	GREEN	GREEN		
N1091	Lake Tandure Site 8	10/03/2025	403,480	0.529	0	0.000	AMBER	AMBER		
N1092	Lake Pamamaroo Inlet (Site 9)	10/03/2025	257,541	0.331	136	0.017	GREEN	AMBER	*Anabaenopsis sp.*	Potentially toxic
N1129	42510013 Centre Pamamaroo (Site 13)	10/03/2025	495,103	0.723	272	0.005	AMBER	AMBER	*Phormidium sp.*	Potentially toxic, taste & odour
N1093	Lake Pamamaroo Outlet (Site 10)	10/03/2025	187,562	0.220	0	0.000	GREEN	AMBER		
N1094	Menindee Lakes, Copi Hollow	10/03/2025	281,553	1.228	2,671	0.323	AMBER	AMBER	*Anabaenopsis sp.*	Potentially toxic
N1130	Lake Menindee Site 19	10/03/2025	4,002,030	34.592	37,714	2.952	RED	AMBER	*Raphidiopsis raciborskii*	Potentially toxic, taste & odour
N1339	Lake Menindee outlet regulator	24/02/2025	1,882,478	16.029	11,755	1.317	RED	RED	*Anabaenopsis sp.*	Potentially toxic
N1128	Lake Cawndilla Site 34 Outlet	10/03/2025	1,538,399	4.283	1,054	0.077	AMBER	AMBER	*Raphidiopsis raciborskii*	Potentially toxic, taste & odour
N1095	Darling R. Menindee bhwb pump	10/03/2025	286,400	0.287	0	0.000	GREEN	AMBER		
N1085	Darling River at Menindee Town	10/03/2025	169,244	0.165	0	0.000	GREEN	GREEN		
N1086	Darling R u/s Weir 32	10/03/2025	341,651	0.902	3,790	0.171	AMBER	AMBER	*Limnothrix sp.*	Potentially toxic
N1043	Darling R. Tolarno	2/04/2025	114,517	0.360	0	0.000	GREEN	AMBER		
N1040	Darling R. Pooncarie	2/04/2025	118,258	0.146	0	0.000	GREEN	GREEN		
N1041	Darling R. Burtundy	31/03/2025	735,008	0.727	0	0.000	AMBER	AMBER		
N1074	Darling R. Ellerslie	17/03/2025	381,845	0.751	0	0.000	AMBER	GREEN		
N1075	Darling R. Tapio	17/03/2025	248,838	0.309	170	0.006	GREEN	AMBER	*Raphidiopsis raciborskii*	Potentially toxic, taste & odour
Non routine monitoring Wentworth Weir Pool										
N1366	Pomona (@ Boat Ramp)	18/03/2025	53,865	0.086	0	0.000	GREEN	AMBER		
GREAT DARLING ANABRANCH										
N1350	Silver City Hwy	14/04/2025	1,116,989	2.860	6,858	0.855	AMBER	AMBER	*Anabaenopsis 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 in Table 3. 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 3: 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 mm3/L	No Alert
Green	Low	0.05 to 0.5 mm3/L	Green
Yellow	Medium	0.5 to 5.0 mm3/L	Amber
Red	High	5.0 to 20.0 mm3/L	Red
Dark red	Extreme	> 20 mm3/L	Red

Observations about the satellite images

Figure 1 indicates that Hume Dam had mostly very low-level phytoplankton activity on 01/05/2025.

The satellite image of the Menindee Lakes on 27/04/2025 (Figure 2) shows mostly cloudy conditions. From what is observable on the satellite image, it appears as if the phytoplankton level in Lake Menindee has been improving while the lake has been receiving inflows. Lake Menindee had very low to medium phytoplankton activity. Lake Cawndilla also had very low to medium phytoplankton activity.

Figure 3 indicates that the Murray River near Wentworth had very low phytoplankton activity on 22/04/2025, while the anabranch appears to have had low to medium phytoplankton activity. The Darling River branch had very low to low phytoplankton activity. The latest image, on 27/04/2025, is obscured by cloud cover.

Lake Victoria had very low to high phytoplankton activity on 30/04/2025 (Figure 4). The Murray River downstream of the Lake Victoria outflow had low to medium phytoplankton activity.

Figure 1: Hume Dam 01/05/2025 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.

Figure 2: Menindee Lakes 27/04/2025 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.

Figure 3: Murray River near Wentworth, Lower Darling River and Great Darling Anabranch 22/04/2025 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.

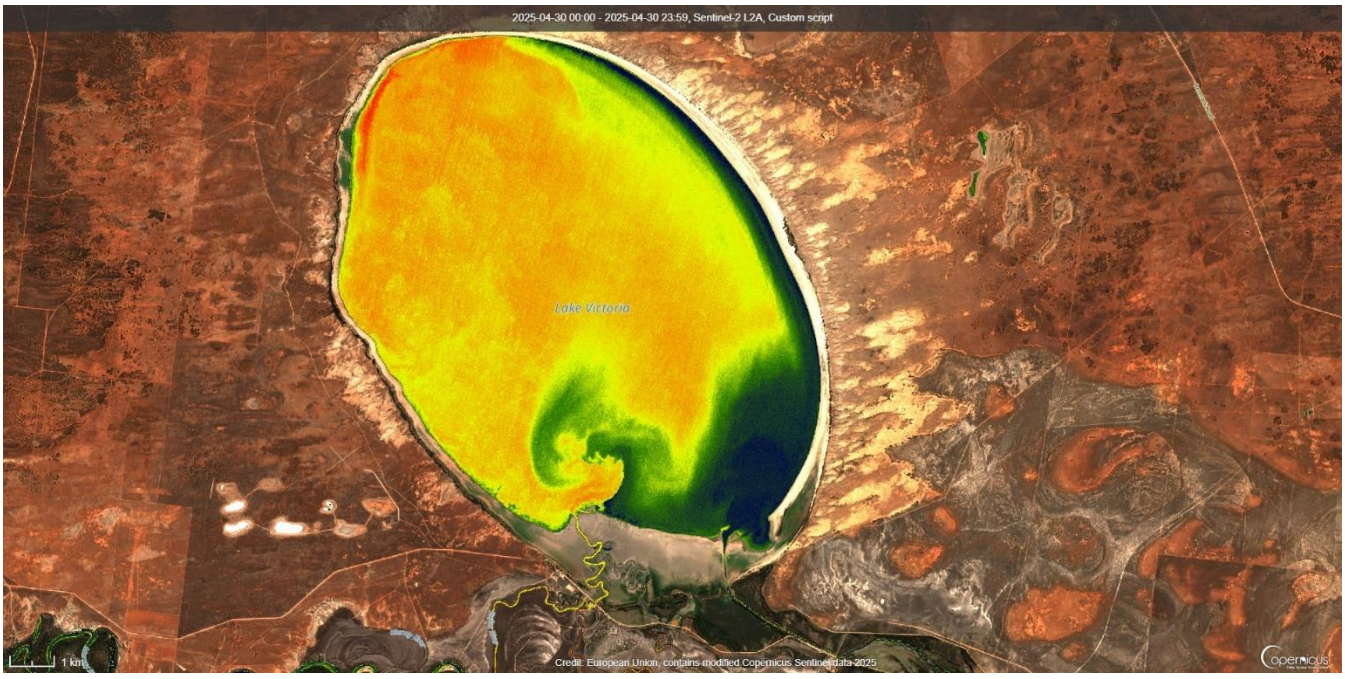

Figure 4: Lake Victoria 30/04/2025 SentinelHub [CC BY-NC 4.0] NSW-Custom Algae Script - TF, WaterNSW.

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

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 in the total biovolume OR The total biovolume of all cyanobacteria ≥10 mm^3/L OR Cyanobacterial scums 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 unsuitable for primary contact recreation

AMBER Alert ≥5 000 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 where known toxin producers are dominant in the total biovolume OR ≥ 0.4 to < 10mm^3/L combined total for all blue-green algae where known toxin producers are not dominant	• 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 < 5 000 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

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

Links to websites of VIC and other agencies

Link to Snowy Valleys Council
Link to North East Water
Link to Goulburn-Murray Water blue-green algal alerts
Link to Goulburn Valley Water blue-green algal information
Link to Lower Murray Water blue-green algal alerts

Go to the WaterNSW Algal Website

www.waternsw.com.au/algae **or at WaterInsights (links below):**
Murray regulated river - https://waterinsights.waternsw.com.au/11904-new-south-wales-murray-regulated-river/updates

Lower-Darling regulated river - https://waterinsights.waternsw.com.au/12104-lower-darling-regulated-river/updates

Contacts

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