Murray and Sunraysia – Algae Alert Status

19 December 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.

Please see Table 1 for all red, amber and green alerts.

Red Alerts

- Great Darling Anabranch at the Silver City Highway
- Manus Lake, at the Pontoon – Snowy Valley Council

Amber Alerts

- Lake Hume at Ebden
- Lake Hume at Heywoods Bay near Bethanga
- Lake Hume Dam Resort
- Lake Hume Dam Wall
- Murray River at Union Bridge Albury
- Murray River below Yarrawonga
- Murray River at Moama
- Murray River at Barham
- Murray River at Murray Downs
- Murray River at Tooleybuc
- Murray River at Euston
- Murray River at Mount Dispersion
- Murray River at Buronga
- Murray River at Merbein
- Murray River at Curlwaa
- Murray River at Fort Courage
- Edward River at Old Morago
- Edward River at Moulamein
- Wakool River at Wakool-Barham Road
- Lake Menindee outlet regulator
- Darling River at upstream Weir 32
- Darling River at Tolarno
- Darling River at Ellerslie

Climate Outlooks

For January, there is a weak signal indicated for rainfall across the regions, meaning there is a roughly equal chance of above or below average rainfall.

Maximum and minimum temperatures are likely to exceed the average across all the regions. (Source: Bureau of Meteorology (BoM))

Algal Outlook

The risk for algal growth is high, with conditions becoming increasingly favourable for blue-green algal growth due to the increased temperatures. Increased algal activity is very likely where waters are shallow or stagnant.

Satellite image observations start on page 4 of this report.

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										
	Manus Lake (SVC) Lake pontoon	8/12/2025	132,350	40.404	9250	0.481	RED	RED		
DLH003	Lake Hume, Ebden	8/12/2025	162,444	0.414	13,054	0.365	AMBER	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
DLH001	Lake Hume, Heywoods Bay nr Bethanga	8/12/2025	88,116	0.693	24,351	0.680	AMBER	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
DLH002	Lake Hume, Hume Dam Resort	8/12/2025	134,981	0.819	25,477	0.712	AMBER	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
DLH004	Lake Hume, Dam Wall	8/12/2025	149,143	0.410	13,446	0.375	AMBER	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
	Tallangatta Supply - Mitta Mitta River at P/S (NE Water)	17/11/2025	1,100	0.006	0	0.000	No Alert	GREEN		
N1000	Murray R. Union Bridge Albury	3/12/2025	45,672	0.618	2,926	0.577	AMBER	No Alert	*Phormidium sp.*	Potentially toxic, taste & odour
N1001	Murray R. Corowa	3/12/2025	20,788	0.026	204	0.004	No Alert	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
	Yarrawonga Weir (outlet) GMW	3/12/2025	12,000	0.192	0	0.000	GREEN	AMBER		
N1008	Mulwala Canal Offtake	3/12/2025	62,607	0.310	0	0.000	GREEN	GREEN		
N1007	Murray R. @ below Yarrawonga	3/12/2025	161,274	1.047	0	0.000	AMBER	GREEN		
N1051	Murray R. Cobram (Barooga)	3/12/2025	38,820	0.044	0	0.000	GREEN	GREEN		
	Cobram WTP, raw water (GVW)	25/11/2025	15,614	0.197	0	0.000	GREEN	No Alert		
N1013	Murray R. Tocumwal	3/12/2025	121,256	0.251	885	0.021	GREEN	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
N1052	Murray R. Picnic Point	1/12/2025	18,305	0.026	204	0.004	No Alert	GREEN	*Microcystis sp.*	Potentially toxic, taste & odour
	Barmah WTP raw water (GVW)	24/11/2025	40,498	0.318	184	0.043	GREEN	AMBER	*Dolichospermum - coiled (≥6µm)*	
N1050	Murray R. Moama (Echuca)	1/12/2025	35,519	0.926	1,496	0.170	AMBER	GREEN	*Dolichospermum sp.*	Potentially toxic, taste & odour
	Torrumbarry Weir GMW	1/12/2025	30,646	1.138	124.000	0.002	AMBER	AMBER	*Limnothrix/Geitlerinema/Anagnostidinema*	
N1003	Murray R. Barham (Koondrook)	2/12/2025	13,836	2.210	136	0.015	AMBER	No Alert	*Dolichospermum sp.*	Potentially toxic, taste & odour
N1054	Murray R. Murray Downs (Swan Hill)	2/12/2025	20,672	2.375	612	0.068	AMBER	GREEN	*Dolichospermum sp.*	Potentially toxic, taste & odour
	Murray River U/S Woorinen pumps GMW	1/12/2025	40,398	5.030	6050	1.222	AMBER	AMBER	*Dolichospermum - coiled (≥6µm)*	
N1055	Murray R. Tooleybuc (Piangil)	2/12/2025	38,573	6.265	1,870	0.193	AMBER	AMBER	*Dolichospermum sp.*	Potentially toxic, taste & odour
N1064	Lake Benanee Rec Area	2/12/2025	0	0.000	0	0.000	No Alert	No Alert		
N1028	Murray R. Euston (Robinvale)	2/12/2025	36,553	5.908	612	0.014	AMBER	AMBER	*Microcystis sp.*	Potentially toxic, taste & odour
N1065	Murray R. Mount Dispersion	2/12/2025	86,219	7.814	0	0.000	AMBER	AMBER		
N1062	Murray R. Buronga	1/12/2025	77,421	9.194	1,150	0.056	AMBER	AMBER	*Microcystis sp.*	Potentially toxic, taste & odour
	Merbein (LMW)	1/12/2025	36,144	5.176	380	0.106	AMBER	AMBER	*Dolichospermum - coiled (=6µm)*	
N1027	414206 - Murray River at Merbein	2/12/2025	67,381	9.352	1,223	0.131	AMBER	GREEN	*Dolichospermum circinale*	Potentially toxic, taste & odour
N1063	Murray R. Curlwaa	2/12/2025	67,423	9.660	0	0.000	AMBER	AMBER		
N1066	Murray R. Fort Courage	1/12/2025	50,229	2.015	0	0.000	AMBER	AMBER		
	Lock 9 (LMW)	1/12/2025	37,430	1.235	152	0.037	AMBER	AMBER	*Dolichospermum - coiled (=6µm)*	
N1077	Murray R. Lock 8	1/12/2025	14,249	0.014	0	0.000	No Alert	GREEN		
N1078	Lake Victoria Outlet Regulator	1/12/2025	2,994	0.004	0	0.000	No Alert	No Alert		

Table 1: Continued

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
BILLBONG CREEK, EDWARD & WAKOOL RIVERS										
N1020	Billabong Ck. Walbundrie	3/12/2025	35,547	0.096	0	0.000	GREEN	No Alert		
N1015	Billabong Ck. Jerilderie	1/12/2025	4,083	0.002	0	0.000	No Alert	No Alert		
N1006	Gulpa Ck. Mathoura	1/12/2025	19,732	0.382	0	0.000	GREEN	GREEN		
N1002	Edward R Deniliquin	1/12/2025	22,863	0.034	0	0.000	No Alert	GREEN		
N1053	Edward R. Old Morago	1/12/2025	10,416	0.802	342	0.040	AMBER	GREEN	*Aphanizomenonaceae sp.*	Potentially toxic, taste & odour
N1005	Edward R. Moulamein	2/12/2025	60,327	6.211	442	0.049	AMBER	AMBER	*Dolichospermum sp.*	Potentially toxic, taste & odour
N1010	Wakool R. Wakool-Barham Road	2/12/2025	28,244	0.486	0	0.000	AMBER	AMBER		
N1004	Wakool R. @ Stoney Crossing	2/12/2025	25,175	0.206	884	0.024	GREEN	No Alert	*Phormidium sp.*	Potentially toxic, taste & odour
N1009	Wakool R. Kyalite	2/12/2025	15,242	0.020	0	0.000	No Alert	AMBER		
MENINDEE LAKE SYSTEM & LOWER DARLING RIVER										
N1042	Darling River at Wilcannia	3/12/2025	148,259	0.144	0	0.000	GREEN	No Alert		
N1087	Lake Wetherell Site 1	24/11/2025	186,691	0.262	0	0.000	GREEN	No Alert		
N1088	Lake Wetherell Site 2	24/11/2025	147,579	0.214	0	0.000	GREEN	No Alert		
N1089	Lake Wetherell Site 3	24/11/2025	38,098	0.054	0	0.000	GREEN	No Alert		
N1090	Lake Wetherell Site 4	24/11/2025	111,150	0.158	0	0.000	GREEN	GREEN		
N1091	Lake Tandure Site 8	24/11/2025	42,161	0.052	0	0.000	GREEN	No Alert		
N1092	Lake Pamamaroo Inlet (Site 9)	25/11/2025	12,616	0.018	0	0.000	No Alert	No Alert		
N1129	42510013 Centre Pamamaroo (Site 13)	25/11/2025	13,473	0.019	0	0.000	No Alert	No Alert		
N1093	Lake Pamamaroo Outlet (Site 10)	25/11/2025	105,690	0.151	0	0.000	GREEN	GREEN		
N1094	Menindee Lakes, Copi Hollow	25/11/2025	283,934	0.381	0	0.000	GREEN	No Alert		
N1339	Lake Menindee outlet regulator	25/11/2025	2,442,477	3.659	0	0.000	AMBER	GREEN		
N1128	Lake Cawndilla Site 34 Outlet	25/11/2025	95,809	0.137	0	0.000	GREEN	GREEN		
N1095	Darling R. Menindee bhwb pump	25/11/2025	52,953	0.052	0	0.000	GREEN	GREEN		
N1086	Darling R u/s Weir 32	25/11/2025	795,923	0.845	0	0.000	AMBER	No Alert		
N1043	Darling R. Tolarno	3/12/2025	1,178,789	1.396	0	0.000	AMBER	GREEN		
N1040	Darling R. Pooncarie	3/12/2025	374,472	0.384	0	0.000	GREEN	No Alert		
N1041	Darling R. Burtundy	2/12/2025	358,650	0.384	0	0.000	GREEN	GREEN		
N1074	Darling R. Ellerslie	2/12/2025	2,791,131	2.826	0	0.000	AMBER	GREEN		
N1075	Darling R. Tapio	2/12/2025	164,935	0.206	0	0.000	GREEN	GREEN		
GREAT DARLING ANABRANCH										
N1350	Silver City Hwy	17/06/2025	59,112,365	86.986	0	0.000	RED	AMBER		

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 17/12/2025.

The satellite image from 18/12/2025 (Figure 2) shows mostly low to very low levels of algal activity at Lakes Copi Hollow, Cawndilla, Menindee, Wetherell and Cawndilla Creek. Mostly very low levels of algal activity were indicated at Lakes Tandure and Pamamaroo.

On the 18/12/2025, the Murray River near Wentworth indicated mostly very low levels of algal activity. The Darling River continues to indicate mostly very low to low levels of algal activity (Figure 3).

Lake Victoria showed mostly very low phytoplankton activity on 18/12/2025 (Figure 4).

Figure 1: Hume Dam 17/12/2025 SentinelHub [CC BY-NC 4.0] NSW- RACC Custom Algae Script - TF, WaterNSW.

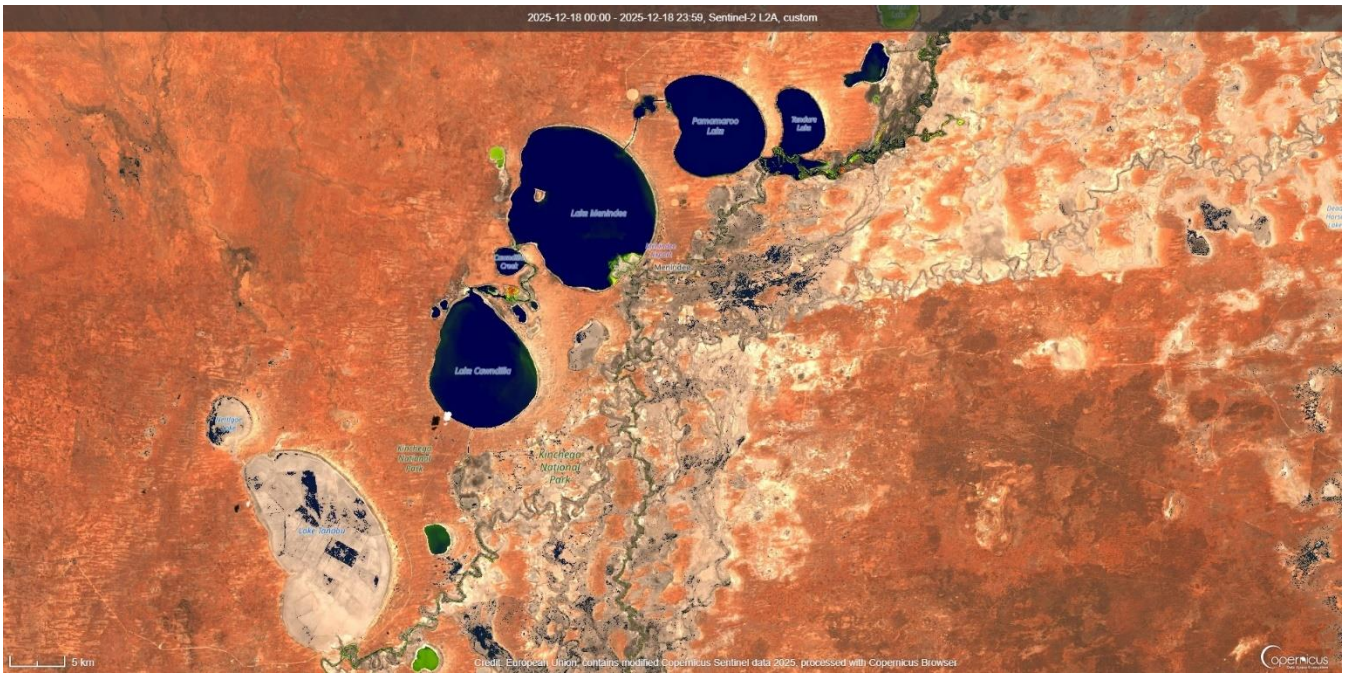

Figure 2: Menindee Lakes 18/12/2025 SentinelHub [CC BY-NC 4.0] NSW-RACC Custom Algae Script - TF, WaterNSW.

Figure 3: Murray River near Wentworth, Lower Darling River and Great Darling Anabranch 18/12/2025 SentinelHub [CC BY-NC 4.0] NSW- RACC Custom Algae Script - TF, WaterNSW.

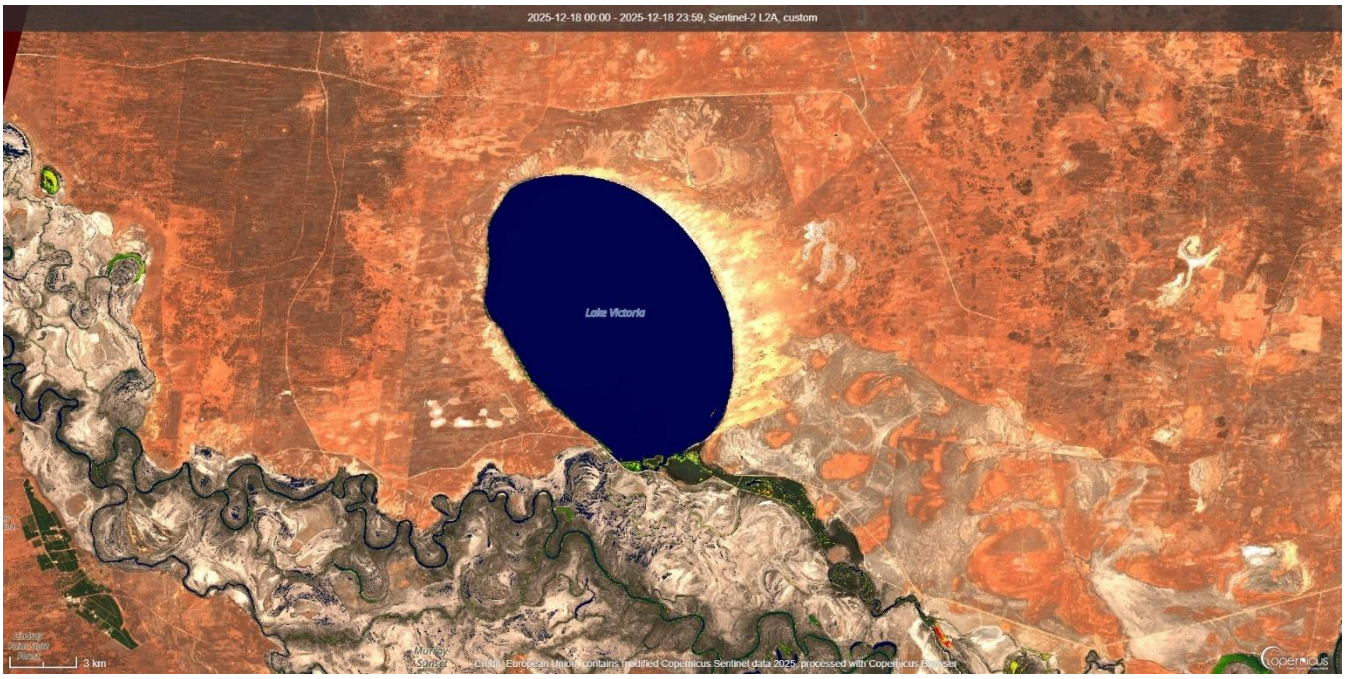

Figure 4: Lake Victoria 18/12/2025 SentinelHub [CC BY-NC 4.0] NSW- RACC Custom Algae Script - TF, WaterNSW.

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

NSW DPI blue-green-algae information for landholders

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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