

ALGAE ALERTS FOR THE BARWON-DARLING RIVER SYSTEM.



Far West Regional Algal Coordinating Committee

14th December 2007

This blue-green algal alert report is based on routine monitoring undertaken by Walgett Shire Council, Bourke Shire Council, Central Darling Shire Council, Brewarrina Shire Council and the Department of Water and Energy

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

Date / Alert	LOCATION	Current Count (total bga C/ml) / BVEq mm ³ /L	Previous Alert Level	Dominant Species
06/11/07 No Alert	Barwon River @ Collarenebri	None detected	Nil	
27/11/07 No Alert	Barwon River @ Walgett Dangar Bridge	None detected	Nil	
06/11/07 No Alert	Namoi River @ Walgett	None detected	Nil	
16/11/07 No Alert	Barwon River @ Brewarrina	None detected	nil	
06/11/07 GREEN	Darling River @ Bourke Boat Ramp	1,324 C/mL 0.14 mm ³ /L BVEq	No Alert	<i>Phormidium formosum.</i>
06/11/07 AMBER	Darling River @ 'Rose Isle'	4,499 C/mL 1.29 mm ³ /L BVEq	nil	<i>Anabaena circinalis</i>
06/11/07 No Alert	Darling River @ Louth	None detected	Green	
30/11/07 RED ↓	Darling River @ Tilpa & Weir Pool	93,136 C/mL 3.3 mm³ /L BVEq	Red	<i>Anabaena circinalis.</i>
30/11/07 RED ↓	Darling River @ 'Trevallyn' 70km d/s of Tilpa	174,653 C/mL 1.67 mm³ /L BVEq	Red	<i>Anabaena sp.</i>
30/11/07 AMBER ↑	Darling River @ 'Atley'	50,099 C/mL 0.58 mm³ /L BVEq	Green	<i>Anabaena circinalis.</i>
30/11/07 AMBER ↔	Darling River @ Wilcannia	112,137 C/mL 2.99 mm³ /L BVEq	Amber	<i>Anabaena circinalis.</i>
30/11/07 RED ↑	Darling River @ 'Culpaulin'	405,152 C/mL 10.32 mm³ /L BVEq	Amber	<i>Anabaena circinalis.</i>

The total observed cyanobacteria genera that contribute to the current alert level are presented in conjunction with a bio-volume equivalent to *Microcystis aeruginosa* calculated for all contributing cyanobacteria species. These data are presented for information only. We recommend that water treatment and stock management responses should not be altered according to the observed cyanobacteria genera. All Cyanobacteria should be considered as potentially harmful to human and animal health when present in blooms.

River users and landholders are advised to avoid waters in areas subject to RED (High) alert levels or with visible algae scums. They should also consider either alternative sources of water for stock. NSW Health advises that any domestic

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use of surface water without treatment is dangerous and should be avoided. Note, boiling water contaminated with blue green algae **does not** remove toxins

Alert Definitions as specified in The National Health and Medical Research Council (NHMRC) *Guidelines for Managing Risks in Recreational Water* 2005

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

Key to alerts for recreational waters

Blue-Green Algal Level	Alert Definition
<p>GREEN (Low Alert) > 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
<p>AMBER (Medium) Alert ≥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</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 commence filtering with activated carbon <p>Investigations into the causes of the elevated levels and increased sampling to enable the risks to recreational users to be more accurately assessed.</p>
<p>RED (High) Alert ≥ 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 potentially toxic species 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 <p>Extreme care should be exercised, and contact with the water should be avoided</p> <p>Action</p> <ul style="list-style-type: none"> • Issue Media Release • Water supply authorities to increase filtering with activated carbon as appropriate <p>Local authority and health authorities to warn the public that the water body is considered to be unsuitable for primary contact recreation</p>

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