



## 30<sup>th</sup> January 2009

This blue-green algal alert report is based on routine monitoring undertaken by the Councils of Wellington, Warren, Narromine, and Dubbo; State Water 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.

**Table 1 – Counts of blue-green algae for Cudgegong Valley sites (cells/mL total species and/or biovolume equivalent in mm<sup>3</sup>/L)**

Date Alert	Storage Sites	Current count, cells/ml	Previous Alert Level	Dominant species
<b>20/01/09 RED</b>	Lake Windamere Rec Area/Dam Wall	213,840 C/mL 2.32mm <sup>3</sup> /L BVEq	Red	<i>Anabaena circinalis</i> and <i>Microcystis flos-aquae</i>
Alert	River Sites	Current Count	Previous Alert Level	Dominant species
<b>20/01/09 AMBER</b>	Cudgegong River d/s Windamere	22,035 C/mL 0.46 mm <sup>3</sup> /L BVEq None detected	Green	<i>Microcystis flos-aquae</i>

**Table 2 – Counts of potentially toxic blue-green algae for Macquarie River sites (cells/mL total species and/or biovolume equivalent mm<sup>3</sup>/L)**

Date Alert	Storage Site	Current Count	Previous Alert Level	Dominant species
<b>21/01/09 GREEN</b>	Lake Burrendong at Dam Wall / State Rec Area / Sport and Rec	51,808 C/mL 0.19 mm <sup>3</sup> /L BVEq	Green	<i>Microcystis flos-aquae</i>
<b>21/01/09 AMBER</b>	Lake Burrendong Stn 6.	45,722 C/mL 3.26 mm <sup>3</sup> /L BVEq		
<b>21/1/09 RED</b>	Lake Burrendong Mookerawa and Stn.3	131,606 C/mL 28.82 mm <sup>3</sup> /L BVEq	Nil	<i>Anabaena circinalis</i> <i>Microcystis flos-aquae</i>
	Lake Burrendong Cudgegong Park	No data	Green	

Cont.

# Blue Green Algae Alerts in the Macquarie Catchment.



## Central West Regional Algal Coordinating Committee

Date / Alert/Trend	River Site	Current Count	Previous Alert Level	Dominant species
25/11/08 No Alert	Macq. R. D/S Burrendong	8,337 C/mL <<0.04 mm <sup>3</sup> /L BVEq	Green	Aphanocapsa sp.
19/01/09 No Alert	Macq. R at Wellington (Nanima Falls)	132 C/mL <<0.04 mm <sup>3</sup> /L BVEq	nil	Aphanocapsa sp.
19/01/09 No Alert	Macq. R at Geurie	3,044 C/mL <0.04 mm <sup>3</sup> /L BVEq	nil	Planktolyngbya sp.
20/01/09 GREEN	Macq. R. Dubbo	3,970 C/mL 0.04 mm <sup>3</sup> /L BVEq	nil	Aphanocapsa sp.
	Macq. R at Narromine	No data	nil	
07/01/09 No Alert	Macq. R at Warren	265 <<0.04 mm <sup>3</sup> /L BVEq	nil	Aphanocapsa sp.

# Alert levels are determined according to a bio-volume equivalent (BVEq) to *Microcystis aeruginosa* calculated for the total observed cyanobacteria genera in the sample. 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 alternative sources of water for stock. NSW Health advises that any domestic use of surface water without treatment is dangerous and should be avoided. Note, boiling water contaminated with blue green algae **does not** remove toxins

For media enquiries contact Anne Brook on **02 6701 9662** or Mob **0419 120 527**

For further information contact Chris Knight (02) **6841 7473** at the Department of Water and Energy Dubbo office

For toll free information on algae conditions throughout the region ring Algal Information Hotline **1800 999 457**



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><b>GREEN</b> <b>(Low Alert)</b> &gt; 500 to &lt; 5000 cells/mL <i>M. aeruginosa</i> OR biovolume equivalent of &gt; 0.04 to &lt; 0.4 mm<sup>3</sup>/L for the combined total of all cyanobacteria</p>	<ul style="list-style-type: none"> <li>• <b>Low levels of potentially toxic species detected – suggesting base crop of blue green algae may be on the increase</b></li> </ul> <p>Action</p> <ul style="list-style-type: none"> <li>• <b>Continue/increase routine sampling to measure cyanobacterial levels</b></li> </ul>
<p><b>AMBER</b> <b>(Medium) Alert</b> ≥5000 to &lt;50 000 cells/mL <i>M. aeruginosa</i> OR biovolume equivalent of ≥ 0.4 to &lt; 4 mm<sup>3</sup>/L for the combined total of all cyanobacteria</p>	<ul style="list-style-type: none"> <li>• <b>Indicates blue-green algae are multiplying</b></li> <li>• <b>Water may have a green tinge and musty taste and odour</b></li> </ul> <p>Action</p> <ul style="list-style-type: none"> <li>• <b>Water supply authorities to commence filtering with activated carbon</b></li> </ul> <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><b>RED</b> <b>(High) Alert</b> ≥ 50 000 cells/mL toxic <i>M. aeruginosa</i> Or biovolume equivalent of ≥4 mm<sup>3</sup>/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<sup>3</sup>/L OR Cyanobacterial blooms are consistently present</p>	<ul style="list-style-type: none"> <li>• <b>High levels of potentially toxic species detected</b></li> <li>• <b>Indicates “bloom” conditions</b></li> <li>• <b>Toxicity should be presumed</b></li> <li>• <b>Water will appear green or brownish and may have a strong musty taste and odour</b></li> <li>• <b>Surface scums could occur</b></li> </ul> <p><b>Extreme care should be exercised, and contact with the water should be avoided</b></p> <p>Action</p> <ul style="list-style-type: none"> <li>• <b>Issue Media Release</b></li> <li>• <b>Water supply authorities to increase filtering with activated carbon as appropriate</b></li> </ul> <p>Local authority and health authorities to warn the public that the water body is considered to be unsuitable for primary contact recreation</p>