

Water entering and leaving the water treatment plants is stringently monitored by GAWB, and Queensland Health regularly audits tap water. Treatment is tailored to remove toxins through flocculation, filtration, chlorination and if necessary with the addition of powder-activated carbon.

Any concerns about the public water supply should be directed to your local council, ie either Gladstone City Council (phone 4970 0745) or Calliope Shire Council (phone 4975 8100 and request the Health Department).

You can have your private water supplies tested by a water testing agent, who can usually be found in the yellow pages of your phone book under "Inspection & Testing Services".

Agricultural Use

There are beef producers and agricultural users in the region who source their water directly from the Boyne, Calliope Rivers and their tributaries. Algal scum or visibly discoloured water may be toxic to livestock and domestic animals. Farmers should prevent access to affected water and provide alternative supplies. Generally algae do not affect the suitability of waters for irrigation.



Wildlife

Apart from freshwater mussels and the organs of aquatic animals, consumption of game and fish that has been in contact with algal infested water can be considered safe. Central Queensland University studies on the meat of barramundi, red-claw and mussels from Lake Awoonga have been undertaken.



Barramundi and other fish in Lake Awoonga are considered safe to eat if caught in waters where Blue-Green Algae have been detected, provided they are washed in clean water and the organs removed.

Results indicate that barramundi and red-claw meat is safe to eat, provided they are washed in clean water and the organs removed. As a precaution though, it is recommended that mussels not be consumed.

For Further Information, contact:



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GAWB works hard to ensure that your water is safe to drink

Gladstone Area Water Board



What are Blue-Green Algae?



Water samples are taken and analysed regularly

What are Blue-Green Algae?

Blue-Green Algae (also called Cyanobacteria) are microscopic photosynthetic bacteria that are natural inhabitants of our waterways, estuaries and the ocean.

Some Blue-Green Algae species are toxic and can release toxins into the water. There is a concern that the toxins may cause illness in humans and other aquatic animals. Some algae species also release compounds which impart musty or earthy tastes and odours into the water. In still water such as lakes, ponds and reservoirs, these algae may multiply sufficiently, especially in summer months when water temperature increases, and can cause the water to become discoloured so that it appears green, blue-green or greenish-brown. This discolouration may have been observed in some quiet, still areas of Lake Awoonga. The Gladstone Area Water Board (GAWB) undertakes regular visual inspections and regular water monitoring as part of their water quality monitoring program and storage management operations.

GAWB also undertakes visual surveys for scum and flocs of Blue-Green Algae which could occur during calmer weather if the Blue-Green Algae rises to the water surface. Flocs sit on the surface of the water or the shoreline and may disappear and reappear on subsequent days and, as a result of wind action. Not all species at Lake Awoonga form scums and their blooms may not be clearly visible.

Blue-Green Algal blooms are very common over summer in farm dams, in lakes, in estuaries and in slow moving rivers in all states of Australia.



Blue-green algae are natural inhabitants of waterways, estuaries and oceans.

A Blue-Green Algae monitoring report for Queensland is provided by the Department of Natural Resources & Mines (DNRM) and is accessible on their website: www.nrm.qld.gov.au.

Water samples are taken at various locations, including both of the intake towers and Riverston Bay at Lake Awoonga, and also at Futter Creek



The GAWB Blue-Green Algae Contingency Plan was reviewed and updated in 2004, based on DNRM Drinking Water guidelines, Australian Drinking Water guidelines, and on advice from Blue-Green Algae experts.

GAWB has two separate action plans for responding to increased Blue-Green Algae at Awoonga:

1. Blue-Green Algae Contingency Plan for Raw, Drinking and Stock Waters which includes increasing monitoring and notification of affected persons, as well as treatment plant alterations to effectively deal with the increased Blue-Green Algae.
2. Blue-Green Algae Contingency Plan for Recreation Waters which includes increasing monitoring, and changing the recreation hazard level on the Blue-Green Algae signs at Lake Awoonga and Futter Creek, and releasing an information statement to the public.

Levels of Blue-Green Algae in Lake Awoonga are not significantly different from the levels in other Queensland lakes during the hot, still summer months. Water quality testing results are available directly from GAWB on request.

Drinking Water & Recreational Activities

Drinking untreated water directly from Lake Awoonga or any lake or river is not advisable if Blue-Green Algae concentrations are elevated. Water from Lake Awoonga is treated at either the Gladstone or Yarwun Water Treatment Plants and despatched by Gladstone City Council and Calliope Shire Council for drinking.



Taking water samples for analysis



The effect of ingesting Blue-Green Algae in water is still not clearly understood. As a precaution, bathing, swimming or showering in water with high

concentrations of Blue-Green Algae should be avoided. Skin rashes on some sensitive people have occurred and there is always the possibility of ingestion from primary contact activities. There have also been reports of eye irritations, sore throat, ear-ache, vomiting, diarrhoea, fever, muscle weakness or cramps in people who have swallowed or swam through algal scum.

For specific details on risks associated with blue-green algae ingestion and contact, please visit the Queensland Health's website: www.health.qld.gov.au, and in particular you might like to view their document "Cynobacteria in Recreational and Drinking Waters", or phone Queensland Health on (07) 3234 0111.

When routine monitoring indicates that the level of Blue-Green Algae in Lake Awoonga has risen, several steps will be taken:

- If Blue-Green Algae levels are $<20,000$ cells/ MI^{-1} , signs at Lake Awoonga are adjusted to indicate low levels of Blue-Green Algae, and monitoring is maintained.
- If Blue-Green Algae levels rise to between $20,000$ and $100,000$ cells/ MI^{-1} , signs at Lake Awoonga are adjusted to indicate moderate levels of Blue-Green Algae, and monitoring is continued.
- If Blue-Green Algae levels rise to $>100,000$ cells/ MI^{-1} , signs at Lake Awoonga are adjusted to indicate high levels of Blue-Green Algae, monitoring is increased, and an alert is issued to



Water is treated at the water treatment plants to ensure it is safe to drink