

Gippsland Lakes Blue-green algae update

December 28 2011

Factsheet No 7

What is the current situation?

A blue-green algal bloom of the species *Nodularia spumigena* is affecting the Gippsland Lakes.

Concentrations of *Nodularia spumigena* found in the affected areas of the Lakes currently exceed the health trigger value for recreational activities as specified in the Guidelines for Managing Risks in Recreational Water¹. Exposure to *Nodularia spumigena* through direct contact and ingestion at these levels can result in adverse health effects.

Testing has indicated that the algae are producing a toxin which is being taken up by seafood.

The Department of Health has advised that the toxin can affect liver function.

In fish, toxins will accumulate to the greatest degree in the innards, but will also accumulate in the head and in the flesh, particularly if blooms continue over long periods.

Can I eat fish caught in the Gippsland Lakes?

Recent test results show that the toxin is concentrated in the innards of fish and that fish which have had gills and guts removed are safe to eat.

Recreational anglers are advised to remove and discard guts and gills from fish prior to cooking.

Fish should not be cooked whole as this will re-distribute toxins from the innards to the fish flesh, making it unsafe for consumption.

Can I eat mussels, prawns or crabs caught in the Gippsland Lakes?

Mussels, prawns and crabs caught in the Gippsland Lakes system continue to remain unsafe for human consumption.

¹ National Health and Medical Research Council (NHMRC) 2008

Gippsland Lakes Blue-green algae update

Can I buy and eat seafood from the Lakes?

Licensed commercial fish suppliers are being advised that commercial fishing can recommence, on the condition that fish from affected areas are processed to remove guts and gills prior to sale to consumers.

Most fish landed by commercial fishers at Lakes Entrance are caught out at sea in areas unaffected by this algal bloom.

How else might the algae in Gippsland Lakes affect me?

If you come into contact with the water in some parts of the Lakes, you could get skin irritations, respiratory or hayfever-like symptoms. Ingestion of water through swimming may lead to symptoms related to liver function.

The Department of Health advises that contact with the water should be avoided, particularly in areas where scums and discoloured water are evident. There are signs in place in areas affected by the blue-green algae.

In other parts of the Lakes, people are urged to check the conditions before coming into contact with the water or allowing pets to swim.

Can I swim and undertake other watersports?

Swimming and any water sport or activity, including skiing and inflatable tubes and 'donuts' that result in direct contact with affected water are not recommended.

What should I do if I come into contact with affected water?

If contact is made, users should remove any affected clothing and wash themselves thoroughly with clean water after coming ashore. Wetsuits should be thoroughly rinsed before being worn again to remove any traces of algae.

Users who experience any health effects following recreational use of the Lakes should seek medical advice. For further information on health issues contact Department of Health's Environmental Health Unit on 1300 761 874.

Can my dog swim in the Gippsland Lakes?

Dogs and other pets can also be affected, so it is safer not to let them enter the water in areas where there are warning signs in place or discoloured water is evident.

What is being done?

PrimeSafe, the statutory authority that regulates the safety of meat, poultry and seafood in Victoria, is coordinating arrangements with licensed commercial fishers to ensure that fish from the Lakes are not offered for sale to consumers unless they have been processed to remove guts and gills.

Toxin levels will continue to be monitored. As soon as testing shows that seafood found in affected areas contains levels that are safe for human consumption the public will be informed.

Gippsland Lakes Blue-green algae update

The Department of Sustainability and Environment (DSE) is working with a multi-agency Incident Management Team to monitor the situation. Signs have been erected at key sites around the Lakes to advise the public about the health implications of the blue-green algal bloom.

How long will the bloom last?

Tests are being conducted on a regular basis to monitor the type, amount and extent of algae present. There is no definite length of time that the bloom will remain. Once the testing shows the bloom has cleared the message will be relayed to the public.

What other places can I visit in Gippsland?

There are plenty of beautiful places around the Gippsland Lakes for people to visit and enjoy the outdoors. Boating can still be enjoyed in many areas of the lakes, swimming at patrolled beaches and fishing on Ninety Mile beach and at Lake Tyers is encouraged and fantastic walking and cycling trails are accessible throughout the lakes area.

Contact local Visitor Information Centres at Bairnsdale on 0351 523444 or Lakes Entrance on 0351 552966 or visit www.inspiredbygippsland.com.au for information about areas to visit and activities to pursue in Gippsland.

General information about Blue-green algae

- Blue-green algae (cyanobacteria) are bacterial organisms that undergo photosynthesis, and have some of the characteristics of bacteria and of algae. They can appear singularly or in colonies, and are present in almost all aquatic ecosystems, including creeks, rivers, lakes and wetlands. Individual cells are very small, so blue-green algae can be present in a water-body without being visible.
- Under certain environmental conditions, numbers can increase rapidly and blooms, or scums, become easily visible across the water surface. The blooms range in colour from dark-green to yellowish brown.
- Blue-green algae rely on sunlight for energy, with their growth rate determined by the level of nutrients available in the water. Unlike other algae they also contain pockets of gas called “vacuoles” which allow them to control their buoyancy. This ability to move within the water column gives blue-green algae an advantage over other organisms in competing for nutrients. However, as soon as the water becomes turbulent, they cannot remain afloat, and this lessens their advantage and so reduces the growth rate.
- Waters that flow slowly with low turbulence are at a particularly high risk of algal blooms. Blooms are likely to form when the water is relatively still, nutrient levels are high and temperatures are warm. When conditions remain favourable, blooms can last weeks to months especially if nutrient levels are high. Cooler, windy weather or increased flow may reduce or stop them fairly quickly.

Gippsland Lakes Blue-green algae update

- When blooms die, the decomposition of the algal cells consumes the oxygen in the water. Breakdown of large blooms can deplete water oxygen levels to the point where fish suffocate. Fish that are dead, dying or swimming erratically should not be handled or consumed. You can report a fish death event to the EPA on 1300 EPA VIC (1300 372 842).
- Blue-green algal blooms typically occur during the summer/autumn period. They have been recorded in the Gippsland Lakes in 1965, 1971, 1974, 1987-88, 1995-96, 1996-97, 1999, 2001, 2002 and 2008/9.

For further information please contact the Department of Sustainability and Environment Customer Service Centre on 136 186 or visit the DSE website:
www.water.vic.gov.au

Useful resources:

NHMRC, 2008, *Guidelines for Managing Risks in Recreational Water*. National Health and Medical Research Council.