

Cyanobacteria (Blue-green algae) in Hawke's Bay waterways

September 2014

What are algae?

Algae are plants that grow in the water. They are a natural part of the environment and are an important food source for fish and small invertebrates. Under certain environmental conditions they can grow excessively, forming blooms floating on the water surface. These may make the water look as though food colouring has been added. Algae also may form algal mats, growing on rocks in rivers.

Are all algae harmful?

No, algae are natural components of rivers. However some algae can cause problems for people and animals.

It can be difficult to tell the difference between harmful and harmless algae just by looking at them. Some algae cause problems by blocking water pumps and hoses. One group of algae - known as cyanobacteria or blue-green algae - produces toxins. Cyanobacteria may harm people or animals if swallowed, inhaled, or they are in direct contact with skin.

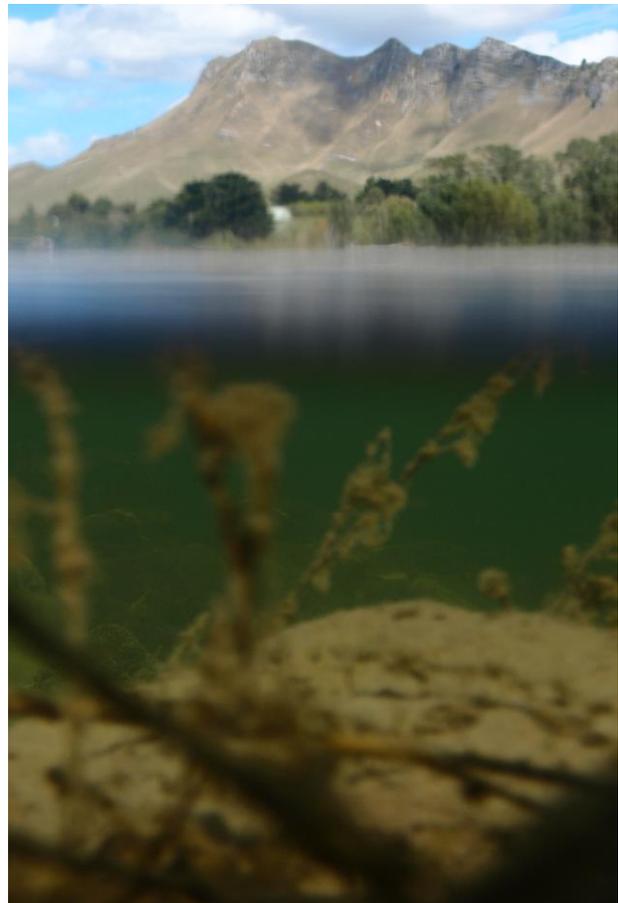
Swallowing water containing toxin-producing cyanobacteria can cause vomiting, diarrhea, abdominal pain, cramps and/or nausea.

Skin contact with water or scums containing cyanobacteria can lead to irritation of the skin, eyes, nose and mouth, and asthma or asthma-like symptoms. Exposure to high levels can result in serious illness or death. Eating fish and shellfish from affected areas should be avoided because they can concentrate the toxins produced by the cyanobacteria in their flesh. Animals are also at risk from poisoning.

How can I tell if the algae are harmful or toxic?

The only way to know if cyanobacteria are harmful or toxic is to look under the microscope. However, the two types can be quite distinctive, so try and make sure you know what to look for.

Cyanobacteria can occur as algal mats growing on stones or rocks in the riverbed. These mats are usually dark brown or black in colour. The mats may come loose from the riverbed and form floating 'rafts', which



can accumulate along the edge of waterways.



In lakes cyanobacteria normally occur in the water column, which can tinge the lake water with colours ranging from bright green to dull brown. In lakes cyanobacteria can move up and down in the water column so the water colour can change quickly (see below).

What are the risks to me and my animals?

It is very difficult to determine the risks of contact with cyanobacteria, particularly the mat-forming cyanobacteria that occur in rivers. Cyanobacteria do not always produce harmful toxins. It is not clear what triggers toxin production.

Always treat cyanobacterial blooms and mats as though they are harmful.

Avoid contact with algal blooms and mats, and avoid allowing your animals, especially dogs, scavenge in and around the water where mats may have washed up.



How big a problem does Hawke's Bay have?

Hawke's Bay does not appear to have any greater issue than anywhere else in the country. However, there have been unconfirmed cases of illness and deaths in dogs and cattle in Hawkes Bay. It is important to remain vigilant about algae around rivers and lakes to protect you, your family, and your animals.

Why do they bloom?

Like most plants, cyanobacteria grow more rapidly in summer when temperatures are higher. Since they favour stable riverbed conditions, they are more common when it hasn't rained for a few weeks.

Algae flourish and grow rapidly when favourable conditions exist, such as warm summer temperatures, lots of nutrients in the water and stable water flows. If nothing is eating the algae or causing them to die, they can grow excessively, often forming dense blooms. Wind

over ponds, dams or lakes may cause a scum or foam to collect along the downwind side of the water body.

Cyanobacteria are most abundant in the rivers and lakes in summer and autumn.

What should I do if I get sick?

If you think you are sick from exposure to cyanobacteria through drinking, inhaling or skin contact, seek urgent medical attention.

What should I do if my animal gets sick?

If you think your animal is sick from exposure to cyanobacteria through drinking, inhaling or skin contact, see your vet immediately.

Let your vet know that you think your animal may have been exposed to potentially toxic cyanobacteria.

What should I do if I think I have an algal bloom in my pond or dam?

See HBRC's brochure '[My Pond's Gone Green](#)' for more information on algal blooms on private land.

Where do I get more information?

If you would like more information please contact the Water Quality and Ecology Team at Hawke's Bay Regional Council on (06) 835 9200, or speak to your local veterinarian.

Often Asked Questions

Can I swim in water containing cyanobacteria?

No. Because we cannot tell with certainty whether the cyanobacteria are producing toxins or not, it is always best to assume that they are. You should avoid contact with water where algal blooms are present – either in lakes where water appears discoloured or in rivers if cyanobacterial mats are present.

What if my drinking water supply comes from the river?

You should not drink water exposed to cyanobacteria. You cannot make water safe by boiling, filtering or some treatments. In some cases this may increase the risk.

If you think your water may be affected, please contact the Public Health Unit.

Can my animal swim in, or drink from water containing cyanobacteria?

No, as for humans it is best to keep animals away from water bodies where cyanobacteria are present. Stock can ingest large volumes of water and are therefore vulnerable to cyanobacteria poisoning. Dogs in particular enjoy scavenging around the water's edge so it is important to keep dogs away from washed up cyanobacterial mats.

It is best to provide an alternative drinking source for animals in areas where cyanobacteria are present.

If you have any concerns about your animal's behavior or health after contact with potentially toxic cyanobacteria, contact your local vet immediately.