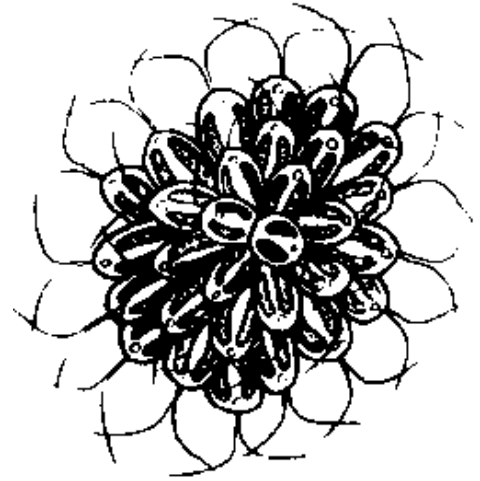


Blue-Green Algae



What are blue green algae?

Blue-green algae are naturally-occurring, microscopic organisms that live in fresh water and are found in lakes and rivers throughout the province. They are a type of photosynthetic bacteria called cyanobacteria; they are not true algae. Normally, blue-green algae are barely visible in water, but when conditions change and become favourable for their growth (i.e. warm temperatures, increased nutrients), populations can rapidly increase to form a large mass called a bloom. Blooms most commonly occur during the late summer and early fall, often in shallow slow moving water, but can also occur below the surface in deeper water.

How can I recognize a blue-green algae bloom?

Dense blue-green algae blooms may make the water look like bluish-green pea soup, but can range in colour from red to olive green. When the bloom is very large, algae may form solid looking clumps. Fresh blooms often smell like freshly mown grass, while older blooms smell like rotting garbage.

How can blue-green algae blooms be reduced or prevented?

Blooms of blue-green algae may form when nutrients levels increase in a waterbody. Increased nutrients in a lake as a whole can result from the cumulative effect of small inputs from sources like lawn fertilizers, septic systems, detergents, and stormwater runoff. Algal blooms are better mitigated by prevention than remediation. Taking steps to reduce or prevent sources of nutrients from entering the water can reduce the occurrence of blooms. Preventative steps include, but are not limited to the following:

- Using phosphate-free detergents and not bathing in lakes;
- Maintaining a naturalized shoreline on lakefront properties and not using fertilizers;
- Taking steps to reduce nutrient run-off such as increasing upland infiltration and populating shorelines with native plants; and
- Ensuring that septic systems do not leak or discharge into water bodies, have sufficient attenuation area to prevent septic nutrients from reaching the water, or by using alternative septic handling methods.

Should I be concerned about blue-green algae?

Although many forms of blue-green algae are relatively harmless, some forms produce toxins which can be harmful to your health and the health of your pets. The most common toxins are called microcystins.

Symptoms of human health effects from contact with these toxins can include:

- Itchy, irritated eyes and skin if you swim in contaminated water.
- If the toxins are swallowed, symptoms such as headaches, fever, diarrhea, abdominal pain, nausea and vomiting.
- If swallowed in large quantities more serious health effects may occur.

For more information about the health related risks of algae blooms, contact your local health unit.

What do I do if I see blue-green algae?

If you suspect a blue-green algae bloom, **assume toxins are present** and call the Ministry of the Environment, Conservation and Parks' Spills Action Centre at **1-800-268-6060**.

As the bloom may dissipate before ministry staff can arrive on site, you may be asked to take a sample of the bloom. A sample should include:

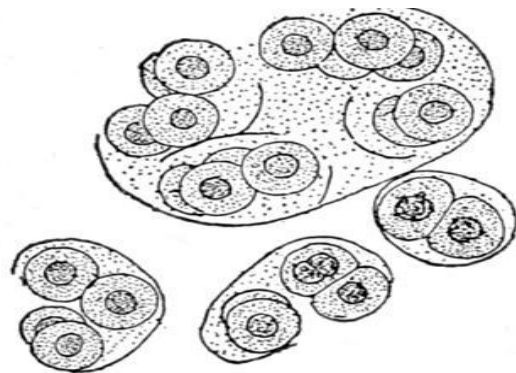
- At least 500mL in a clean container for algae identification.
- At least 1L in a clean amber or opaque container for analysis of toxins. If only clear containers are available they may also be used.

All samples should contain both algae and water, and should contain more than the minimum volume if possible. Samples should be kept in a fridge or cooler until submitted to MECP. Possible sampling containers include: 2L pop bottles, juice jugs, etc.



Until confirmed otherwise, assume the bloom contains toxins. If drinking water is obtained from a surface water source during a blue-green algae bloom, then it is possible that the water may become contaminated with toxins released during decomposition of the algae cells. Water obtained from a municipal line or groundwater well will be unaffected.

- Do not drink, bathe or shower in untreated water. Do not allow children, pets and livestock to drink or swim in the water.
- Do not use herbicides, copper sulphate or other algacides that may break open algae cells and release toxins into the water. Boiling the water and treating it with a disinfectant may also release toxins.
- Do not cook with the water. Your food may absorb toxins from the water.
- Do not eat the liver, kidneys and other organs of fish caught in the waterbody. Be cautious about eating fish caught in water where blue-green algae blooms occur.
- Do not rely on jug filtration systems as they do not fully protect against toxin poisoning.



To report a potential algae bloom: MECP— Spills Action Centre 1-800-268-6060
MECP—Thunder Bay District Office (807) 475-1205

For more information on health related risks of algae blooms: Thunder Bay District Health Unit (807) 625-5900