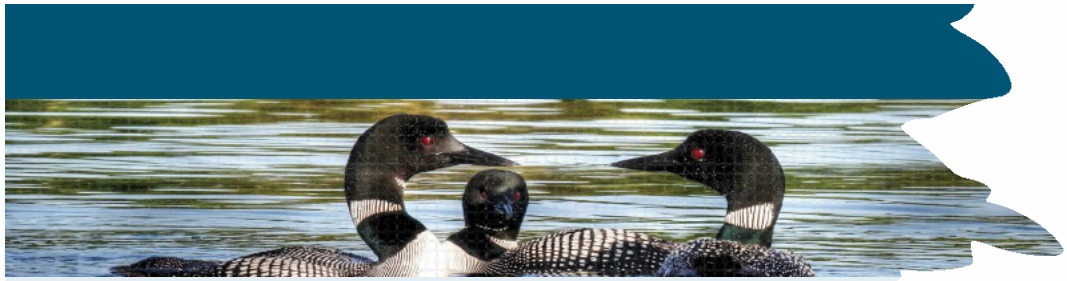

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Algae in Ontario

Algae are an integral part of all freshwater ecosystems

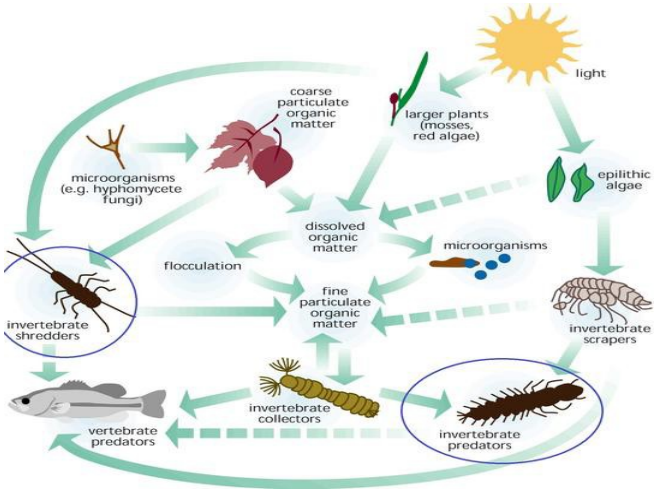
What are Algae?

Algae are unicellular microscopic plants that occur naturally in lakes, ponds, rivers and streams. Algae require warm temperatures, sunlight and an influx of nutrients in order to flourish. When these conditions are accelerated, algae can grow at a considerable rate resulting in algal blooms.

Algae and the Environment

Algae are an important part of the environment, as it is a food source to many invertebrates. Larger types of algae can also serve as shelter for fish and other types of aquatic species. However, in excess, it can trigger an algal bloom. Blooms can take over and upset the natural balance of an ecosystem.

Figure 1: A common food web found in a freshwater ecosystem.



Source: Stream Corridor Restoration: Principals, Processes, and Practices, October 1998, The Federal Interagency Stream Restoration Working Group, http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/ stelprdb1044574.pdf

How to recognize Algal Blooms?

Algal blooms typically occur from midsummer to fall when there is a substantial amount of nutrients. Phosphates and nitrates are the leading nutrients that can cause algal blooms. These nutrients are often introduced through agricultural and storm water runoff. When blooms occur they can form a layer of “scum” on the surface of the water. They can also change the colour and clarity of the water and often have a distinguishable smell.

Photo1: Blue-green algae blooms in a slow moving, nutrient enriched irrigation drainage.

Source: Willem van Aken, January 1989, Science Image, http:// www.scienceimage.csiro.au/image/4628

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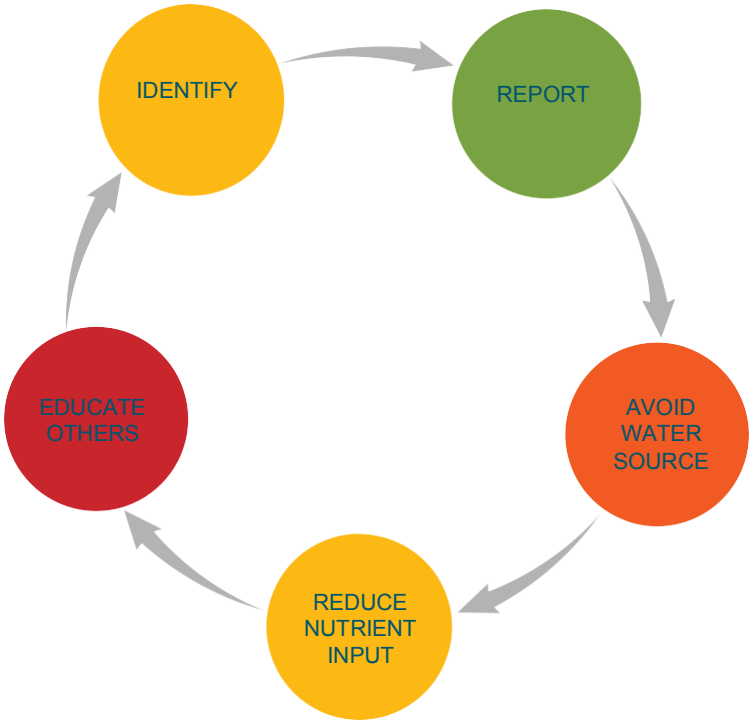
What can you do?

Blue-green algae have been around for billions of years, however only recently has it come into light as an environmental concern. It is an environmental challenge that we not only face in Canada, but worldwide. As populations continue to grow and landscapes develop, nutrient enrichment becomes a primary concern for our freshwater ecosystems.

Blue-green algae are also referred to as Cyanobacteria. Cyanobacteria are microorganisms that structurally resemble bacteria, however have the ability to conduct photosynthesis. Cyanobacteria can easily be recognized by its bluish- green colour. New blooms smell like a freshly cut lawn, while older blooms smell like rotting garbage. Cyanobacteria are very dangerous because it has the ability to produce toxins which can harm people and animals.



- ✓ Use phosphate free products
- ✓ Leave your shoreline natural
- ✓ Properly care and maintain septic systems
- ✓ Use compost over synthetic fertilizers
- ✓ Limit using petroleum products around water as they can interact with nutrients triggering blooms
- ✓ Dispose of used automotive fluids at a proper facility
- ✓ Keep livestock away from the water
- ✓ Take steps to reduce soil erosion
- ✓ Report algae sightings to your local Algae Watch Program
- ✓ Contact your local Health Unit for water advisories
- ✓ Report blue-green algae to the MOECC Spill Action Hotline immediately 1-800-268-6060

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