

# Algae

## Fact Sheet

Algae are an important component of a healthy ecosystem. They are a large group of diverse plant like organisms that use photosynthesis to produce their own food. Algae are the source of much of Earth's oxygen. They capture more of the sun's energy and produce more oxygen (a byproduct of photosynthesis) than all plants combined.



Algae are important ecologically because they form the base of the food chain. They include phytoplankton, a mostly microscopic single-celled plant, which are eaten by small animals called zooplankton (microscopic animals) that drift near the surface of the water.

The zooplankton are in turn fed upon by larger zooplankton, and small fish. Larger fish eat the smaller ones. At the top of the open-water food web are fish-eating birds, large fish such as walleye, pike and bass, and humans.

### 10 Facts about Algae

- Algae is a single celled plant. It can grow in virtually any environment that possesses carbon dioxide, sunlight, minerals, and sufficient water
- There are over 20,000 known varieties of algae
- Are mainly found in marine or freshwater environments
- Produce oxygen which other aquatic life uses.
- Are important to humans in the form of food and medicine.
- Are vital in many food chains acting as the primary producer of organic matter.
- Have chlorophyll and can manufacture their own food through the process of photosynthesis.
- It is the major food for fishes.
- The oceans cover about 71% of the Earth's surface, yet algae produce more than 71% of the Earth's oxygen; in fact, some scientists believe that algae produce 87% of the world's oxygen.
- They also help remove huge amounts of Carbon Dioxide.

Algae blooms are an overabundance of algae. When conditions are favourable populations can rapidly increase to form a matt or scum in the water. Blooms occur during the warmer weather of late summer or early fall. One key factor affecting the growth of algae is the amount of available nutrients, typically phosphorus. One of the main issues with the Bay of Quinte has always been the amount of phosphorus entering it from a variety of rural and urban sources. Phosphorus is essential to all life but in excess amounts it causes problems like, too much algae.

# Algae

## You can help prevent the growth of algae:

- use phosphate-free detergents, personal care and household cleaning products
- use phosphorus free lawn fertilizer (10-0-10) the middle number is the phosphorus
- maintain a natural shoreline on waterfront properties
- maintain your septic system to ensure it does not leak into a water source
- on agricultural lands, plant cover crops and minimize fertilizer use
- reduce agricultural runoff by planting or maintaining vegetation along waterways

## What are Blue-green algae?

Cyanobacteria, commonly called blue-green algae, are primitive microscopic organisms that have inhabited the earth for over 2 billion years. They are bacteria, but have features in common with algae. Their scientific name cyanobacteria comes from the Greek word blue. They occur naturally in a wide variety of environments including ponds, rivers, lakes and streams.



Some strains of blue-green algae can produce toxins that are harmful to both humans and animals. Dense blue-green algae blooms may make the water look like bluish-green or green pea soup or turquoise paint; however, olive-green and red blooms have been reported. Take a cautious approach with blue-green algae blooms, although many varieties are harmless, some can produce toxins. Only laboratory analysis can determine whether or not a bloom is toxic.

If you suspect a blue-green algal bloom:

- assume toxins are present
- avoid using, drinking, bathing or swimming in the water (check with your local health unit for swimming advisories)
- restrict pet and livestock access to the water

If you suspect a blue green algae bloom, you need to report it to the, Ministry of the Environment and Climate Changes Spill Action Centre at 1-800-268-6060

Contact your local health unit for information on health risks associated with blue-green algae blooms.

Visit our web site for fact sheets on blue-green algae. [www.bqrap.ca](http://www.bqrap.ca)

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