ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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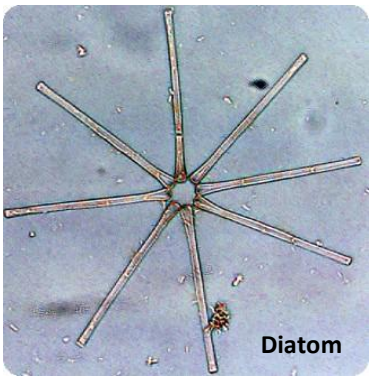
WD-BB-6 2019

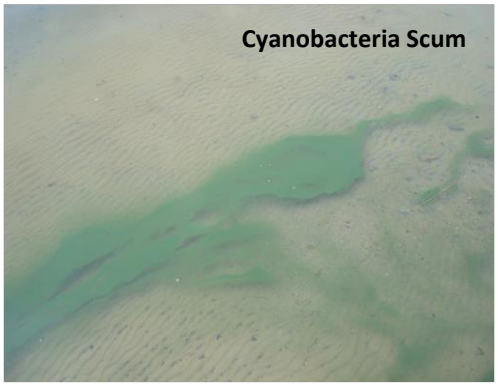
Algae

Algae are tiny microscopic plants, also known as phytoplankton, that grow naturally in lakes, rivers and oceans. Algae can grow rapidly and form dense concentrations referred to as blooms. Algal blooms generally occur under high phosphorus concentrations when one species of algae out-competes other algae and becomes so abundant that the water appears murky.


Diatom

Algal blooms consist of either harmless algae or potentially toxin-producing cyanobacteria. Diatom, green and golden-brown algal blooms occur throughout the ice free period. Algal blooms typically turn the water bright green, dark green, blue-green or brown and may cause obnoxious odors around the lakeshore.

Cyanobacteria blooms create a greater problem for lake users when cells become concentrated with wind and wave action, forming a colorful surface scum. This scum may form by lake currents or windblown into the shallows and onto exposed rocks, making the shoreline appear painted with blue-green paint. When these organisms die and decompose, they create very unpleasant odors that resemble septic system effluent.


Cyanobacteria Scum

Treatment Options

Algal blooms are indicators of excess nutrient inputs to a waterbody from the surrounding watershed. The problem is often related to nearby construction activities, stormwater runoff, agricultural impacts, fertilization and land-use changes, as these activities cause soil nutrients to wash into the lake. Algae use these nutrients to reproduce in vast quantities, resulting in impaired water quality. If the sources of pollution are reduced through lake management activities, the amount of nutrients entering the lake can be reduced thus decreasing the probability and extent of future blooms. To identify sources and possible solutions, a watershed management plan can be developed. A plan recommending best management practices and low impact development methods will guide residents and local officials on how to best reduce the nutrient inputs to a waterbody.

Reducing nutrient inputs is generally more effective than directly removing algae from the waterbody through chemical treatment. Applying chemicals is only a temporary solution and is not likely to be approved unless the waterbody serves as a municipal water supply that is subjected to odor or treatment plant deficiencies due to cell proliferation.