

# Lake Algae:

## The Good, The Bad, and The Ugly

There's almost nothing more relaxing than sitting by the edge of a beautiful lake, watching the waterfowl drift serenely by, perhaps taking a swim or a boat ride, enjoying the peaceful lap of fresh water against the shore. However, when lake algae reaches nuisance levels, it can make a normally pleasant experience much less so.

We've probably all seen it - green scum, water that looks like pea soup, a funky smell to a usually clear and beautiful lake. What happened? Probably an algae bloom. The presence of algae in a lake



is usually a good thing. Algae, or phytoplankton, form the basis of the food web and most other life in the lake depends on it for food, oxygen production, and nutrient cycling. However, too much algae, or too much of certain kinds of algae can be problematic. Algae blooms are not only unsightly and sometimes stinky, they can also deplete dissolved oxygen and cause fishkills, inhibit the growth of other plants by shading, clog intake pipes, and sometimes even release toxins into the water. Blue-green algae can be particularly bothersome since it tends to accumulate rapidly, produce toxins, and is generally less palatable to fish and zooplankton than other species of algae.

So what causes algae to proliferate to nuisance levels? In a nutshell, excessive nutrients. An excess of nutrients entering the lake from the surrounding watershed provides too much food for the algae,

allowing them to grow out of control. Typically people think of phosphorus as the nutrient that limits algae growth in lakes. However, nitrogen can also drive algae growth and in some lake systems is the primary source of nutrients for algae production.

One of the most common sources of nutrients in developed lakes is failing septic systems along the lake shore. Many lakeside communities are

familiar with this scenario: a lakeside cabin that has been used as a vacation home for decades is converted to year-round use. The septic system is either old and in need of repair, or not adequate to treat the increased flows. When lake shores become dotted with such homes, the result is untreated wastewater carrying nitrogen and phosphorus into the lake. Other nonpoint sources of nutrients to lakes are eroded lakeshores and streambanks, stormwater from developed areas, agriculture, and fertilizers or chemicals. Activities within a lake's watershed affect the nutrient levels in the lake, and can cause more problems than just algae blooms.

*Courtesy of Minnesota Environmental Partnership. For more information, visit [www.mepartnership.org](http://www.mepartnership.org)*

**What can you do to keep your lake free of nuisance algae and other lake problems? Here are some tips:**

### HAVE YOUR SEPTIC TANK PUMPED

and inspected at least every three years. Make sure it is pumped through the manhole of the tank. If there is a problem or failure, have it fixed. Sometimes a group of lakeside homeowners can get together and work out a deal with a sewage pumper or contractor to reduce some of the costs of pumping, inspections and repairs.

### USE LESS FERTILIZER

on your lawn. If you must fertilize, make sure you test your soil and use the proper amount. Don't fertilize within 48 hours before a rainstorm.

**INSTALL RAIN BARRELS** and rain gardens on your property to increase infiltration and reduce the amount of stormwater runoff entering the lake. This also serves to recharge the groundwater in your area.

**REPAIR ERODED SHORELINES,** driveways, or steep slopes on your property. When it rains, the bare soil carrying phosphorus particles is washed into the lake.

**ENCOURAGE LOCAL FARMERS** to practice agricultural best management practices (BMPs) to reduce runoff and nutrient contamination from their farms.

**ENCOURAGE LOCAL MUNICIPALITIES** to implement stormwater BMPs in their towns.

