

Blue green algae, technically known as cyanobacteria, are microscopic organisms that are naturally present in lakes and streams. People should suspect that blue -green algae could be present in water that is visibly discolored or that has surface scums. Water affected by blue-green algae is so strongly colored that it can develop a paint-like appearance. Only laboratory testing will verify its presence.

A. Causes of algae blooms.

1. Warm water
2. Sunny days
3. Reduced rainfall
4. Increased phosphate concentrations in the water.
5. Decreased lake level.

B. Results of an algae bloom

1. Blue green hue of the water.
2. Scum especially around the weeds on the eastern shore of the lake.
3. Some algae produce toxins, that may sicken pets
4. Blue-green algae toxins are not removed from water taken directly from the lake with chlorine, ultraviolet light or boiling
5. Algae that develop mats inhibit boating and swimming
6. Algae decomposition causes a decreased oxygen level in the lake.

C. Ways to reduce phosphorus levels in the lake.

1. Follow a septic system maintenance protocol
2. Only use non phosphorus lawn fertilizers
3. Do not place lawn debris or wood ashes in or near the lake
4. Fast boating stirs up the lake bottom releasing phosphorus. Go slowly in water shallower than a depth of 12ft.
5. Shoreline vegetation filters phosphorus. It is best to have a 15-25 ft buffer of deep rooted plants at your shoreline.

D. Algae controls

1. Copper sulfate works best at a pH of 6.0-6.8. Ballston Lake has a pH of 7.6
2. Copper sulfate is toxic to some fish and could cause a carp fish kill.
3. Copper products cause algae cells to break releasing their toxins.
4. Copper sulfate works best if applied when algae begins to increase in late July.
5. Copper sulfate would cost \$6,000 per application. May need 2 applications
6. Algaecides would cost \$11,000 per application. May need 2 applications.
7. Aeration systems cost \$150,000
8. Decreasing algae would increase the amount of rooted plants like milfoil.

In general high nutrient (phosphate) levels fuel nuisance algae and plant growth. Killing the algae is a short term control. A long term solution is to reduce nutrients in the water.

The best control with the highest probability of success is watershed management and phosphorus inactivation.