

Planktonic Algae - Conditions and Control Options

Planktonic algae are microscopic plants that live in every drop of pond water. These primitive creatures are extremely important to the aquatic ecosystem because they are the base for the food chain and are largely responsible for the chemistry of the pond. Planktonic algae are important because they produce oxygen and food for the animals that live in the pond. These tiny plants get their nutrients directly from the water, so their growth and reproduction are dependent on the amount of nutrients (i.e. fertilizer) in the water. Because stormwater ponds collect water flowing from yards and roads in the community, they often grow an abundance of algae as a result of the many sources of nutrients in residential and commercial developments.



Is murky green water unhealthy? Should the water be clear?

No, not necessarily. The murkiness is a sign of a growing plankton population which is responding to nutrients that have washed into the pond. This is Nature's way of capturing nutrients that might otherwise contaminate rivers and beaches. The image on the left shows a healthy pond where green algae are managing nutrients in the water.

Can too much algae become a problem?

Yes. A severe algae bloom can cause a fish kill because the death and decay of the algae will remove oxygen from the water.

Are there any particularly bad algae?

Yes. One group of algae, known as blue-green algae (cyanobacteria), can produce toxins that can affect the health of fish and animals that come into contact with the water. Cyanobacteria often become problems when the pond receives too much phosphorous, a condition that is most often associated with runoff that contains excessive lawn fertilizers or animal wastes.



Cyanobacteria are normally very bright green and usually form a film on the surface. Most other planktonic algae are darker green and do not form surface films. There are some cyanobacteria that do not form surface films and a few that are filamentous. On occasion a pond may develop "red algae," which also may be harmful to

aquatic animals. "Red algae" are not actually algae, but their growth and control are similar to that of other planktonic algae.

How do I control planktonic algae blooms?

The only ways homeowners can prevent recurring algae blooms are 1) to reduce the nutrients washing into the pond and 2) to use other plants or compounds to absorb nutrients from the water. Licensed applicators can treat algae blooms using properly labeled herbicides, but, unless the nutrients are reduced, the chemical herbicides will provide only temporary control of algae blooms. Also, ponds that are experiencing an algae bloom are more likely to have a fish kill when treated with an herbicide because of the rapid death and decay of the algae, so it is important to provide adequate circulation when ponds develop severe algae blooms.

How can homeowners or HOAs prevent and control algae blooms?

1. Soil test before fertilizing your lawn to prevent over-fertilizing.
2. Sweep/blow fertilizers and grass clippings off of roads and driveways to prevent them from washing into storm drains.
3. Do not apply fertilizers on the bank slopes of ponds.
4. Do not discard grass clippings or yard waste in ponds, ditches, or street drains.
5. Pick up pet waste.
6. Do not wash cars in driveways - the soaps break down into nutrients that grow algae. Wash cars on the lawn instead and use phosphorus-free soaps.
7. Do not feed fish, turtles, or waterfowl. These animals turn food into fertilizer and are healthier when they feed themselves naturally.
8. Plant wetland plants along the shoreline to filter runoff and absorb nutrients.
9. Place floating wetlands in the pond to extract nutrients directly from the water.
10. Consider circulation systems that increase oxygen conditions in the pond.

