

# Algae Management

There are 7,000 alga species native to Florida. It is not possible or desirable to eliminate all algae. These tiny plants that add oxygen to the water and provide food for millions of other tiny creatures.

Alga and many other microscopic organisms are the base of the food web. Millions of slightly larger creatures feed on algae. These creatures in turn are food for the next level of animals in the food web. Algae are an important foundation for the rest of the aquatic ecosystem. See the [Algae](#) article for more information about this important plant.

Algae management requires a thoughtful combination of prevention and biological control. Here are some of the ways algae are controlled in stormwater ponds and small lakes.

## Chemical control

This is the most common approach to algae management. Lake managers use a variety of chemical formulas to kill algae. Algae species are not equally susceptible to these formulas. Some species are far more difficult to kill.

In addition, algae are very adaptable. Being a simple life form similar to virus or microbes, algae sometimes develops resistance to repeated use of common algaecides. At Beautiful Ponds, we change our formulas constantly to avoid this problem. We also experiment with chemical manufacturers on new, environmentally responsible formulas for some of the particularly difficult to control algae.

Another problem with chemical control is that many beneficial organisms are also susceptible to algaecide. Snails, clams, freshwater mussels, immature insects, frogs and young fish can all die from chemical algae applications that are a little too concentrated. The person “treating” your lake for algae must be extremely careful to mix just enough chemical to kill the specific species of algae without killing all the “invisible” beneficial creatures.

Guess what the snails and freshwater mussels do for your lake? They filter the water and eat the algae. So, what happens if you kill the natural, beneficial creatures that keep the lake balanced and “clean”? You create a vicious cycle. You kill the algae. The alga sinks to the bottom and becomes food for the next generation of algae. The lake is out of balance. There are no tiny animals to eat the algae and keep it in balance, so the alga just returns with a vengeance.

Your lake manager must be thoughtful and careful when using chemicals in your lake. It is also important to educate your neighbors about lake ecology. A lake is not a swimming pool. A little alga is a natural part of Florida lakes. Some neighbors might not like it, but the vicious cycle of chemicals and algae blooms is a harsh cycle.

## Harvesting

Harvesting / manual removal is also possible for algae control. This may be more expensive than chemicals, but it has immediate results. Access to the lake with a pickup truck is required. Two benefits are no chemicals enter your lake and some lake nutrients (the algae) are removed.

Removing nutrients from the lake is environmentally friendly & helps reduce future algae growth.

## An ounce of prevention

What you do in your yard directly affects the amount of algae in your lake. The most important way to control algae is to implement sustainable landscape designs and practices. Sarasota and other counties have already passed ordinances regarding fertilizer reduction and sustainable landscape practices. These laws focus on several principles.

### 1 Fertilizer

- a. Fertilizer is algae food. Keep it far away from any water. Several counties have made 10-15 feet as the minimum. All lake management societies recommend more.
- b. Keep fertilizer away from any paved surface. The chemicals easily wash down the road directly into your stormwater ponds.
- c. If you fertilize, follow the guidelines of your county or state. Sometimes, these guidelines are voluntary. People who choose to ignore them are choosing more algae.
- d. Do not fertilize prior to heavy rains. The faster fertilizer is washed into the lake the less is available to the landscape plants.

### 2 Mowing

- a. Keep grass clippings out of the lake. The tips of grass blades are high in nitrogen. Algae thrive on nitrogen.
- b. Establish a filter zone around the shore. This significantly reduces the risk of shore erosion as well as keeping some nitrogen out of the lake. A filter zone can be a two foot wide area of grass that is six or more inches high.

## Shade

Algae thrive on sunlight, particularly in the shallow water near the shore. Any way we can reduce sunlight penetrating to the bottom of the shallow areas helps reduce algae growth.

1. Water lilies are an excellent plant to block sunlight. Their wide leaves act as an aquatic forest leaving open shady areas under the surface. Since lilies grow in shallow water, they provide shade where we need it most.
2. Pond dye is a vegetable oil product that blocks the ultraviolet sunrays. This choice is excellent because it causes no harm to the aquatic ecosystem. There are no chemicals to harm the aquatic wildlife or accumulate in the lake bottom. The only drawback to pond dye is that heavy rains wash it out of the lake.
3. Trees are another source of shade. You may remember natural lakes you have visited. Most lakes throughout the continent are surrounded by mature trees. These trees provide a home for many wildlife species, but also give valuable shade to the water.

## Aeration

Aeration functions exactly like a bubbler in a small aquarium. An air compressor on the shore pumps air to the bottom of the lake through a heavy rubber hose. The air forms small bubbles at an air stone or diffuser. The bubbles float up carrying water from the bottom to the surface. This water current transports the oxygen starved bottom water to the surface where it absorbs oxygen from the air.

This process keeps the bottom of the lake oxygenated. The tiny creatures at the bottom of the lake can now survive because they have oxygen and they can compete with alga for the nutrients in the water.

## Biological control

The best control is Mother Nature's way; a balanced ecosystem. Many organisms eat algae or compete with algae for nutrients. These include fish, beneficial bacteria, snails, freshwater muscels and especially aquatic plants. Every lake and community is different, so we cannot offer a specific solution for your lakes without an inspection. But, the general rule is that algae blooms when these other organisms are absent.

## Education

Florida lakes, streams and stormwater ponds are warmer and more nutrient rich than lakes “up north”. Consequently, we have more algae. The water management district offers free literature to help educate your community. Here is a link to their website. [www.WaterMatters.org](http://www.WaterMatters.org)

With all the new people moving to Florida each year, repeated efforts to educate your community is necessary. Most people will “do the right thing” once they have heard the message a dozen times.

## Beautiful Ponds

We offer articles similar to this one regarding a variety of aquatic and environmental topics. We provide monthly articles for your community newsletter or website as part of our lake management service. Our educational work with the community will lead to fewer complaints and to neighbors who understand and enjoy the lake view even more.

We can implement this multifaceted approach to algae management in your lakes to keep your community environmentally healthy as well as beautiful. This will lead to lakes that have fewer algae blooms.