

General Pond Maintenance and Resource Guide

Wyoming County Soil and Water Conservation District

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➤ Common Pond Problems:

Aquatic Vegetation:

Aquatic vegetation is the most common maintenance issue for pond owners. Algae and aquatic plants can quickly take over a pond given favorable growing conditions. See general guidelines below for mitigating this issue:

1. Excess nitrogen from runoff is a large contributor to algal blooms and plant growth. Check with neighbors who may be fertilizing land in your pond's watershed and within close proximity. Additionally, livestock waste runoff within the watershed can contribute to decreased pond health.
2. Dig your pond to an average depth of at least 6 feet to discourage the growth of water weeds.
3. Physically removing aquatic plants may be beneficial, however, left over roots and seeds will often cause re-establishment of species.
4. Triploid Grass Carp may be stocked in the pond to eat submergent weeds. A permit is needed from the NYS Department of Environmental Conservation and a proper recommendation for number of carp per acre must be followed.
5. For severe aquatic vegetation problems there are chemical (herbicide) control options. Caution and proper water testing should be conducted ahead of time as there can be adverse side effects if not used properly.

6. If your pond is larger than an acre and has a drainpipe, a winter drawdown may reduce vegetation in the spring. Draining the pond by one third from November to March will expose submerged plants to freezing and drying.

Toxic Cyanobacteria:

Cyanobacteria, commonly called blue-green algae is a photosynthetic bacterium (not actually algae) that can produce and release toxins. This can form mats on the water's surface or remain suspended in the water column. In some cases, cyanobacteria blooms don't affect the water's surface and can be difficult to see with the naked eye.

Cyanobacteria flourishes in still, warm waters that are rich in nitrogen and phosphorus. Blooms are most likely to occur during the middle of the summer and early fall. Pets, livestock, and humans should avoid contact and drinking when there is a bloom. The toxins can cause anything from skin irritation to neurological and liver damage, and even death. Do **not** allow dogs, livestock, or any other pets to drink from ponds as dogs have been killed in as little as 15 minutes from cyanobacteria ingestion.

Fish Kills:

Dead fish can occur for a variety of reasons, such as too much aquatic vegetation and algae, deoxygenated water, physical turnover or water mixing, improper use of herbicides, pollution, disease and natural mortality.

➤ **Pond Management:**

- Physical removal of aquatic weeds via raking is an option for managing weeds but is not a permanent solution. Root or seed

debris left in the water will often lead to re-establishment of aquatic weeds.

- The use of non-toxic dyes such as Aquashade, Blue Springs, and Crystal Blue will prevent light from penetrating deep into the water where submergent plants can grow. Thereby, reducing the growth of nuisance weeds.
- Triploid Grass Carp will consume and help control several submergent pond weeds. A recommendation for stocking per surface acre is needed as well as a permit from the NYS Department of Environmental Conservation. Expect Grass Carp to begin aquatic vegetation control after the first year that they are stocked.
- A variety of herbicides can be used to control chronic algae and pond weed problems. Common active compound includes:
 - Copper Based Compounds – Copper Sulfate
 - Sodium Carbonate Peroxide
 - Potassium Permanganate
 - Ammonium Sulfate

*****Note: All herbicides can be damaging if used above the recommended dosage & without proper testing of the water's acidity and hardness.

One danger with any chemical control method is the chance of an oxygen depletion after the treatment caused by the decomposition of the dead plant material. Oxygen depletion can kill fish in the pond.

- Pond aeration promotes natural biodegradation of waste material and pollutants, circulates oxygen throughout the pond, reduces fish kills, and breaks down stratified pond layers.

➤ **Services and Resources:**

- **Smith Creek Fish Farm, All Aquatic Services:** Is a company serving the Buffalo, Rochester and surrounding areas. Located in Bliss, NY, they provide aquatic vegetation management, filamentous algae control and removal, nuisance goose control services, water testing services, fountain and aeration system services, DEC certified fish stocking, and chemical control products.

Phone: (585) 322-7805

Location: 5540 Rt. 362, Bliss, NY 14024

Website: SmithcreekFishFarm.com

- **Whispering Pines Fish Farm:** Is a fish stocking service located in Holland, NY. Trout, Bass, Crayfish, Perch, Grass Carp, etc. are all sold health certified with guaranteed live delivery. Fish feed, perennial water plants are also available along with a free pond consultation.

Phone: (716) 496-7440

Location: 11829 Matteson Corners Road, Holland, NY 14080

Website: Whisperingpinesfishfarm.com

- **National Pond Service:** Has serviced residential, commercial, and agricultural ponds for the past 20 years. Based out of Canandaigua, NY, National Pond Service provides algae, duckweed, and aquatic weed management solutions, fountain and aeration services, pond construction and repair, as well as shoreline maintenance.

Phone: (585) 394-5890

Location: 3565 Swamp Rd. Canandaigua, NY 14424

Website: nationalpondservice.com

➤ **Additional Learning Resources:**

- A Diagnostic Tool for Pond Weeds and Algae along with specific management solution:
 - <https://aquaplant.tamu.edu/plant-identification/>
- Information on stocking fish in your pond and obtaining the proper permits:
 - <https://www.dec.ny.gov/outdoor/57966.html>
- Information on Cyanobacteria and effects of toxin exposure:
 - https://www.cdc.gov/habs/pdf/cyanobacteria_faq.pdf
 - <https://www.epa.gov/cyanohabs/health-effects-cyanotoxins>
- Things for consideration when building a pond:
 - <https://rethinkrural.raydientplaces.com/blog/how-to-build-a-pond-or-lake-on-your-property>

