



Chautauqua County Soil & Water Conservation District
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What Caused My Fishkill?

What exactly causes a fishkill? Simply enough, fish need dissolved oxygen to survive. A fishkill is the direct result of low concentrations of dissolved oxygen in a body of water. Fishkills should always be reported to the Region 9 NYS DEC Fisheries Office if you suspect that the fishkill was the result of unnatural causes or a chemical spill.

Winter Fishkill

Shallow bodies of water with dense vegetation are more likely to experience a fishkill in the winter months. The distressed fish gasp under the ice and snow due to the lack of dissolved oxygen and die. In most cases, landowners are unaware of that a fishkill occurred until the ice melts and the fish are visible.

A manual solution is to remove snow from several areas of the pond to allow sunlight to penetrate the pond. Otherwise, an aerator or deicer can be used throughout the winter months to introduce oxygen and sunlight into the pond. Aerators can also be used in the summer months.

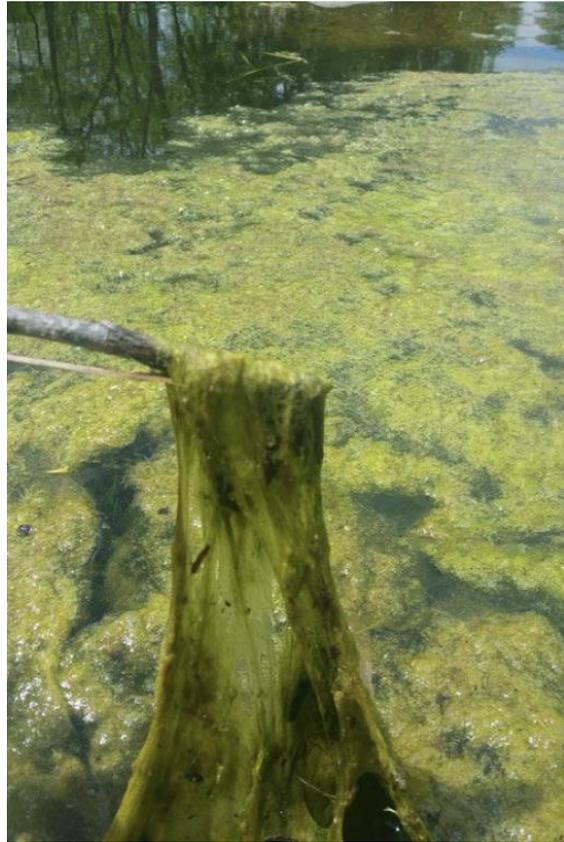
Summer Fishkill

In the summer months, fishkills are usually the result of algal blooms and/or an overabundance of aquatic vegetation in nutrient rich waters. Fishkills can also be the result of toxic compounds.

Filamentous Algae

Filamentous algae is subject to reach nuisance levels, is commonly mistaken for pond scum and can easily be identified by its hairlike cell structures that intertwine into large mats that float on the surface of ponds and lakes in New York and Pennsylvania starting in the mid-summer months.

While Filamentous algae is a food source for protozoans, insects, and fish; an overabundance can potentially cause a fishkill in late summer or fall, as the dying algae consumes oxygen levels when it decomposes.



Natural methods of Filamentous algae control include physically netting, raking and removing algae mats away from the pond's surface and perimeter. This not only physically removes the algae from the pond; it also cuts nutrient levels present in the water immediately. Filamentous algae should always be disposed of away from the ponds edge to prevent regrowth.

Channel Catfish



Channel Catfish can also be introduced to combat Filamentous algae. Omnivorous Channel Catfish do not require a stocking permit, have a complex diet and find strange foods like Filamentous algae and wood quite palatable. Channel Catfish can be aggressive eaters, therefore the recommended stocking rate for Channel Catfish can be determined by

the ponds size and the density of the Filamentous algae present in the pond.

Triploid Grass Carp

Triploid Grass Carp require a stocking permit in NYS and are sterile, aggressive eaters that like to eat tuberous aquatic vegetation like Duckweed, Eurasian Milfoil and Hydrilla, but do not favor Filamentous algae. If you are not sure how to identify the aquatic vegetation in your pond, check out our printable “Pond Weed Identifier”:

<https://soilwater.org/wp-content/uploads/Pond-Weed-Identifier-2020.pdf>



Barley Straw Pond Kits

Barley Straw Pond Kits are a popular natural method of algae control. As the barley decomposes, a mild concentration of hydrogen peroxide is produced that is safe for fish but still works as an algae deterrent. The kits are most effective when they are added as soon as the ice leaves the pond. Barley Straw Pond Kits, Channel Catfish, Largemouth Bass, Triploid Grass Carp and other game fish are available through the Chautauqua County Soil & Water Conservation District.

Visit <https://soilwater.org/spring-fall-fish-stocking-sale/> to learn more about the District's spring and fall fish stocking sales and/or to download a Farm Fishpond License Application and a Triploid Grass Carp Stocking Permit Application. Inbox us to be added to the District's fish sale mailing list. Fish purchased at the spring sale were distributed on May 14, 2021. Order forms for the upcoming fall sale are expected to be mailed out and available for download in July of 2021.



Landowners can also reduce algae causing concentrations of phosphorus and nitrogen in several ways:

Make Septic System Management a Priority

A septic system that is capable of handling the anticipated occupancy and intended usage should be selected. Pay attention to the soil composition, topographical layout and existing tree root systems during the planning stage. The location of new and existing septic systems should be well documented by the landowner. It is critical to never build over, pave over or put a garden in on top of a septic tank or its lines. Always keep the area free of trees and shrubs, or any other obstructions.

The system should be professionally emptied by a licensed servicing company every 1-3 years depending upon professional recommendations, number of occupants and system usage. Always select biodegradable toilet paper and avoid flushing grease, oils and/or non-biodegradable solids that can potentially clog or back up the septic system. If the system starts to drain slowly or shows signs that it is backing up, call a professional immediately.

Monitor water usage. Performing back-to-back chores that require heavy water usage can easily overwhelm a septic system. Once a septic system is damaged or becomes faulty, the system can no longer properly filter contaminants entering the leach/drain field. This is why it is doubly important to read labels before purchasing commercial grade detergents and cleaning chemicals. Commercial grade products can contain phosphates and other toxins that can travel into the leach/drain field.

Make Ethical Land Management Decisions

Chautauqua County Soil & Water Conservation District regularly works with the local Farming Community to reduce Agricultural Non-Point Pollution from entering nearby ditches, lakes, ponds and streams in our local watersheds. Anyone who is interested in

learning more about reducing Agricultural Non-Point Pollution is encouraged to contact Chautauqua County Soil & Water Conservation District at Chaut-Co@SoilWater.org

Implement environmentally friendly, chemical free lawn/property maintenance practices. Skip lawn and garden fertilizer and use compost, leaf clippings, and mulched grass instead whenever possible. “Go Phosphorus Free” to keep New York’s waters clean in safe if a lawn fertilizer is an absolute necessity.

Buffers are an excellent way to filter surface water that enters ditches, lakes, ponds, streams and ultimately our local watersheds. Ideally, native species with strong root systems are an excellent choice for a buffer. Selecting native species will in turn support local wildlife. Buffers can also help to prevent erosion.

Chautauqua County Soil & Water Conservation District offered thirty-five species that are native to New York and twenty-five species that are exclusively native to Chautauqua County for its annual tree and shrub sale this year. The next catalog will also include a variety of native species that are perfect for a buffer. The catalog also serves as an excellent reminder that it is time to add Barley Straw Pond Kits to your pond. The catalog is expected to be distributed and available for download in January of 2022. Visit <https://soilwater.org/annual-tree-shrub-sale/> to learn more about the District’s annual tree and shrub sale and/or inbox us to be put on the District’s tree and shrub mailing list.

The District offers pond planning and management consultation to Chautauqua County residents who are interested in constructing a pond for wildlife, recreational and/or fire protection uses. This service assists potential pond owners in the evaluation, layout, and design of ponds. Pond management advice is also available to landowners with existing ponds.