

# Topic: What are Algae and is it a cause for concern in Chippewa Lake?

By Bryan Roels, Chippewa Lake Weed Advisory Committee Chairman

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Algae are simple plants that are found in almost all bodies of waters including lakes, rivers, ponds and oceans. They are a naturally occurring part of the ecosystem and serve a number of important functions; including preventing erosion, absorbing carbon dioxide and serving as food for certain species of fish. However, algae can become a nuisance and even (certain types) can be toxic.

Algae can take on many forms, some are one cell plants that are so small that they can only be seen under a microscope, others are thin and stringy or hair-like. While still others are large and resemble higher plants but without true roots such as the native Chara we see in Chippewa Lake.

While most algae are harmless and an important part of the ecosystem, too much or certain types of algae can affect lake activities and some can be dangerous. The most notable algae that can be (not always) bad is called blue-green algae. The toxic version of the blue-green algae can cause the water to appear blueish-green, redish-brown or even black and has an awful odor. Toxic algae can poison fish and animals. [Chippewa Lake does not have blue-green algae.](#)

The nuisance algae that Chippewa Lake has are the (non-toxic) green algae. Green algae occur in most of Michigan lakes and is typically a free-floating form. Sometimes the mats rest on the bottom of the lake such as when it rains or is colder and other times it floats to the surface. Typically, we see algae blooms in the early to mid-summer months but other times such as this year we have seen mats of algae on the surface in early spring.

## So, what “feeds” algae?

Algae feeds on the nutrients in the water. If there is an overabundance of nutrients algae can get out of control causing huge alga blooms. Causes of excessive nutrients are runoffs from roads, yards or fields, grass clippings, leaves, pet wastes and industrial pollution. Excessive amounts can cause reduced oxygen in the water which may cause fish to die.

## What can we do to reduce the risk of excessive algae?

One HUGE step the community made about 30 years ago was to replace septic tanks with a sewer system. The sewer system greatly reduces the amount of effluents from coming in contact with the lake. Many lakes in Michigan have much worse problems because they do not have a sewer system. Silver Lake in Oceana County is one lake that is currently struggling with this problem and are evaluating going to a sewer system.

Chippewa Lake is currently in overall good shape. If you attended any of the weed control updates you already know that we are classified as a Mesotrophic lake which means that we are about mid-range as water clarity, nutrients, plant growth, etc. which is where we want to be for an inland lake.

To keep track on the health of our lake, we have a group of volunteers that monitor the lake on regular basis during the spring, summer and fall. The volunteers coordinate their efforts with the state-wide Cooperative Lakes Monitoring Program (CLMP) that is administered by the Michigan Lakes Stewardship Program and Michigan Department of Environment, Great Lakes, and Energy (EGLE) which formerly was the DEQ.

Chippewa Lake volunteers are Paul Phillips, Mark Coscarelli and Bryan Roels, together they take more than 50 water samples a year that include: water clarity, dissolved oxygen, chlorophyll and phosphorous. Through the CLMP, we compare Chippewa Lake with 100's of lakes throughout Michigan. In addition, PLM who is our lake weed control manager also takes samples in Chippewa Lake throughout the year and we compare our results with theirs. Combined, we have a good handle on what our lake is doing and able to respond quickly to any changes.

### **Can we reduce magnitude of algae blooms?**

Yes, PLM keeps a close eye on the algae and when we start to notice excessive amounts, we can knock it down. The chemical used to do this is typically Copper Sulfate which is relatively safe and doesn't require posting by EGLE. However, at Chippewa Lake we do require posting for any treatment near the treated areas. Posting is also found on the Chippewa Township website. We also reduce the risk by treating lake weeds as early as possible in order to reduce biomass which creates phosphorous. You can also help by preventing grass clippings, pet wastes, and leaves from going into the lake.

### **Any new invasive algae threat we should be concerned about?**

There is, in recent years Michigan has been invaded by a new invasive aquatic plant threat called Starry Stonewort. Native to Eurasia, Starry can outcompete and choke out native plants and many of the invasives such as Eurasian Milfoil. Starry can also prevent fish from nesting and reproducing by covering areas that they would normally bed.

Although Starry can grow massive mounds up to 33" tall and in water as deep as 20' covering large areas of a lake it is in fact an alga. Starry closely resembles the native Chara until it starts its explosive growth and forms a white star shaped bulbil (see picture below). Starry can choke out other native lake weeds and prevent fish from nesting and reproducing.

Starry has not yet been found in Chippewa Lake but has been recently found in other lakes in Mecosta County. Both the Weed Committee and PLM are keeping a close eye out for it and will react if it is found.

You can help too, by obeying and supporting the new boating law (effective 2019) which makes it illegal to transport or launch watercraft/trailers unless they are free of aquatic organisms including plants. The law also requires boaters to remove drain plugs, drain bilges and live wells prior to leaving a lake.

You can also notify the lake committee if you spot Starry and where you found it. Early detection is our best defense with this invasive plant. The committee will also be having education events at the DNR boat launch periodically during the summer.

### **Fresh Water Green Algae**



## Native Chara



Invasive Starry Stonewort (Note the star like white bulbil, Starry has been found in nearby lakes)



Let me know if you find this type of information valuable and what lake weed topics you would like to see by sending an email to: [Bryan@chippewatwp.org](mailto:Bryan@chippewatwp.org).