

The Rock Lake Improvement Association is monitoring the algae blooms on Rock Lake. We thought that the public would benefit from the following questions and answers about filamentous algae. For further information about RLIA, please see the organization's website at rocklake.org.

What is filamentous algae?

Filamentous algae is an algae that forms dense, hair-like mats. It starts growing at the bottom of the lake and on plants. As it grows, it produces oxygen that gets trapped within its tangled strands. This trapped oxygen then causes the algae to rise to the surface of the water. As the algae dies, it turns brown.

Is it new to Rock Lake?

Filamentous algae is not new to Rock Lake – it is a part of lake ecosystems as are many other kinds of algae.

Why is there more of it this year?

The higher than average precipitation events this year have delivered higher than average amounts of nutrients (phosphorus) running off into our waters. Along with the hotter weather which provides ideal growing conditions, the nutrients cause more algae growth. Lakes across the region, including Lake Ripley and Lower Spring Lake, have also been experiencing larger than normal filamentous algae growth this year.

Is there a connection with zebra mussels?

Zebra mussels, found in Rock Lake, filter algae out of the water column and excrete nutrients onto the lake bottom. This has the effect of making the water clearer allowing for greater growth of filamentous algae which benefit from nutrients near the lake bottom.

Is it harming the lake?

Filamentous algae provides cover for aquatic insects, snails, and other small animals which are valuable fish food. Excessive amounts of algae are certainly unsightly and smell bad. However, it is not causing any irreparable harm because the lake's critters are well-adapted to experience periodic episodes such as a summer with excessive algae growth.

Is it toxic to humans?

It is not toxic to humans. However, it is always good practice to wash your hands after contact with any surface waters or algae.

Can mechanical harvesting machines be used to pick it up?

These machines are not designed to pick up filamentous algae. As confirmed by harvester operators on Madison lakes and Lake Ripley, the machines do not effectively pick it up. In addition, harvesters need a permit from the Department of Natural Resources (DNR) and when allowed on a lake, they are not permitted to operate in water with less than 3 feet of depth. The filamentous algae growth in Rock Lake this year has been located in the shallow waters of Korth Bay, Shultz Bay, the millpond, and the marsh.

Can chemicals be used to treat it?

Chemical algae treatments are generally very ineffective. Spot treatments are very temporary and entire lake treatments are not practical. Algae quickly return (because nutrients are still in the water) and the danger from toxic copper build-up (from the chemicals) in the lake sediment is great. When chemicals kill algae, the sudden large-scale death can result in the growth of an algae than can be toxic to wildlife and humans. Chemical control requires a DNR permit, but a permit is not an option in DNR-designated Sensitive Areas including Korth Bay, Shultz Bay, and the marsh.

How can filamentous algae be removed from the lake in the short-term?

The best method is to take out the floating clumps with use of a rake or net. You can compost these piles or use them in your garden as mulch. Removing floating plants and filamentous algae from the lake requires no permit. However, the DNR sometimes require permits for removal of rooted plants from the lake—so be sure to contact the DNR prior to removing any rooted plants from the lake.

What can be done in the long-term?

High filamentous algae growth in Rock Lake this year does not predict the same growth next year. Adopting preventative measures to limit the flow of nutrients into the lake can help reduce the severity of future nuisance filamentous algae growth during high precipitation years. The Rock Lake Management Plan contains several recommendations that address nutrient reduction including installing conservation practices to prevent erosion, reducing nutrient inputs from streets, installing native shoreline restorations instead of lawns next to the lake, and controlling construction site erosion. Property owners interested in installing conservation practices on their land to reduce nutrient loading to our waters should contact the Jefferson County Land and Water Conservation Department at 920-674-7110.

Sources of information: Wisconsin Department of Natural Resources, Minnesota Department of Natural Resources

Making Waves, 9/14/10

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