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ECNRCD Receives Grant to Improve Water Quality for Maidstone Lake

The Essex County Natural Resources Conservation District has received a \$21,000 grant from the Vermont Agency of Natural Resources to assist lakeshore landowners in assessing and implementing Best Management Practices, in order to protect and improve lake water quality and aquatic habitat.

The long-term summer monitoring and spring phosphorus data show that Maidstone Lake is experiencing an

increase in sediment and phosphorous (Tactical Basin Plan 18), the nutrient that feeds algae blooms and can degrade water quality. The aim of this project is to conserve and restore naturally vegetated shorelands, which help filter stormwater runoff and protect water quality, while providing benefits to aquatic habitat.

Stormwater runoff can carry sediment and nutrients into the lake, especially

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when it flows with a lot of velocity and there is little vegetation to slow and treat it. Grass does not slow or treat stormwater, but a mix of native shrubs, trees, and wildflowers will.

An increase in phosphorous in Maidstone Lake caused an outbreak of an algae bloom, a cyno-bacteria called Gloeotrichia, which was identified last fall. Gloeotrichia are unlike most other algae that are found in lakes, in that they don't get their nutrient from water, but instead from the bottom sediments. They have a rather complex life cycle, which could have serious implications for water quality.

The normal sources of nutrients, especially phosphorus, is from surface water runoff or from internal recycling of phosphorus from the bottom sediment under anoxic (no oxygen) conditions. Gloeotrichia, like algae, need sunlight and warm water to proliferate. More information about algae blooms can be found at the Vermont Lakes and Ponds Web site, or by visiting the Vermont Department of Health at www.healthvermont.gov.

The ECNRCD, the Maidstone Lake Association and Vermont Lakes and Ponds Program will work with lakeshore property owners to inform and assist them with lake-friendly shoreland management practices. The ECNRCD work is based on two phases and this grant covers phase one, which consist of a three-tiered project goal: 1. Offer a Lake Wise Leadership training event, to help get everyone on the same page with what are shoreland threats to the lake and how to solve them: 2. Evaluate lakeshore properties utilizing Lake Wise Protocols,

with site visits for those who wish to participate in learning how to ensure their property is managed with lake-friendly practices; and 3. Identify and design appropriate Shoreland Best Management Practices for specific sites.

This three-tiered approach will provide the necessary information to implement BMP to be designed in phase two, in a later grant proposal. A few examples of vegetative BMPs, are planting and re-naturalizing areas with native plants, establishing no-mow zones, installing rain gardens at the end of the rooftop downspouts, or creating berms or swales to treat stormwater runoff. Structural BMPS include infiltration steps, drip line trenches along roof edges, drywells for gutter disconnects, or waterbars in driveways. These BMPs help protect water quality and aquatic habitat, helping to prevent future algae blooms in Maidstone Lake.

The ECNRCD will host its 25th Annual Canoe/Kayak Paddle from 9 to 11 a.m. on August 20 at the Vermont Day Use Area for those interested in learning more about this shoreland grant opportunity and other activities undertaken by the Conservation District to help protect Maidstone Lake.

The ECNRCD is a political subdivision of the State of Vermont contained in the Soil Conservation Act., and was organized on July 8, 1947. Questions about this grant or other district projects may be addressed to Heather Robinson at 802-424-5353 or essexnrcd@gmail.com.

Past, Present, and Midge

By Midge Rosebrook



I recently read a story about Maidstone Lake receiving a \$21,000 grant to determine what course of action will be needed to help rid our beautiful, 796-acre North Country jewel of the ever-increasing, water quality-robbing effects of blue-green algae. This is the same stuff I saw on the surface of Lake Champlain a few years back, that was so bad, it looked like green paint floating on top of this once-pristine body of water. I can tell you what causes it—groundwater runoff.

I'd like to thank each and every camp owner, from the bottom of my heart, who tries to do the right thing by allowing the native vegetation and plant life to grow on

the lakeshore in front of their cottages. By doing so, it helps to filter out this runoff from much of the silt and sediment before it enters the lake.

Then, there are those who have those beautifully large, dark green, and weed-free manicured lawns with golf course-smooth surfaces on their downward-sloped path directly into the water. And those who have spent the time and dollars constructing those gorgeous rock walls, with nary a soil retaining weed between them. Or the folks who were "lucky" enough to have a natural sandy beach, where the lake water just laps gently over it. They have the lake that they deserve.