

Well the summer has flown by and on behalf of the Roaming Shores Lake Management Committee (LMC) I'd like to wish you a pleasant fall and winter. I'm writing to introduce myself and to update you regarding some of the LMC's activities over the past few months.

My name is Marty Hilovsky, and I've been retained by the Association to advise the LMC and Association board on lake management issues. My company, EnviroScience, Inc., is an Akron-based consulting firm that performs a wide variety of ecological services for government agencies, engineering and industrial clients and lake association around the U.S. We've worked on water quality, weed management and fishery issues for the Association intermittently for the past eight years. Since April of this year, I've been working with the LMC to develop and implement several programs to help protect and enhance Lake Roaming Rock, the star attraction and focal point of your community.

Like many lakes in Ohio, Roaming Rock suffers from an overabundance of nutrients and sediments washing in from the watershed. Although these problem inputs have slowed in recent years, studies conducted by us and others over the past twenty years indicate that the lake continues to become more eutrophic, or nutrient rich, each year. Nutrients not only continue to come in from the watershed, but they cycle in and out of the sediment. Regardless of the source, nutrients-primarily phosphorous-are largely responsible for the blooms of algae and nuisance plants that have plagued the lake and its residents on and off for years.

One of these initiatives undertaken by the LMC this year was in the area of weed management. If you've lived on the lake for a number of years you know that the lake has cycled between periods of almost no weeds to periods where the lake seemed to be choked with weeds. We all know that some level of aquatic vegetation is healthy and needed to support the excellent fishery in the lake. However, too many weeds spoil the fishing, and just about everything else! In early summer, EnviroScience conducted a thorough aquatic vegetation survey of the lake to develop a baseline and recommendations for future management efforts. The LMC believes that surveys of this type will help the Association develop an environmentally sound management program, identify strategies to reduce chemical usage, and reduce costs by providing an independent assessment of what really needs treated. As an example of follow-up, the LMC has recently been looking into a suction harvester as a low impact way to manage weeds around individual properties.

Another initiative was sediment survey which was completed this past month. In general, the survey revealed that sediment accumulation in most coves and inlets is relatively low. In most cases, water depths remained greater than 3 feet and accumulated sediment was less than two feet. The 2010 sediment and water depth information was compared to data from a 1978 survey. This comparison showed few differences, indicating that relatively little accumulation had occurred over this 32 year period. Several exceptions were found, though. The south end of the lake where Rock Creek enters the lake is filling in heavily. Water depths are less than a foot in some spots and a large sand bar is forming in the center of the channel. Similarly, a few of the smaller coves have accumulated a substantial amount of sediment and water depth is very shallow in these areas. In the coming months, the LMC will consider dredging these areas and evaluating ideas for minimizing sediment and nutrient loading in the future.

In the coming year, the LMC will look into the feasibility of an aeration system for the lake. This will help address one of the Roaming Rock's major water quality problems, excess phosphorus. During the summer months, the lake stratifies with cold and deep water near the bottom becoming devoid of oxygen. When this happens, the water column acts like a sponge, drawing large amounts of phosphorus out of the sediment where it later becomes available to fuel nuisance algae blooms. Past work by EnviroScience indicates that this internal cycling of phosphorus may have a bigger impact on the lake than incoming sources from the water shed.

Although the cost of an aeration system for the lake is presently unknown, it is likely to be significant. The cost of inaction, however, could be much higher. Recent work by Washington State University as presented at last month's Washington state lakes meeting indicates that serious infestations of exotic weeds such as Eurasian watermilfoil reduce property values on affected lakes in Washington by an average of 18%. Depression of property values due to nuisance algae blooms, is likely to be similar. Thankfully, Roaming Rock has yet to see much in the way of harmful algae blooms (HABs), but these have been a major problem in numerous other Ohio lakes where they have produced high levels of toxins resulting in public health advisories and rules restricting use of the lake.

One more point about aquatic plants and algae is worth mentioning. There's a strong relationship between these two, with lakes generally being either plant dominated or algae dominated. Plants in plant dominant lakes utilize nutrients that otherwise would be utilized by harmful algae. Heavy chemical treatment of weed beds can result in the sudden release of nutrients producing algae blooms. Given a choice, most communities would strongly prefer to be weed dominated rather than algae dominated, especially given recent problems and publicity associated with HABs and the toxins they produce. Finally, it may not be a coincidence that Roaming Rock has had few problems with algae blooms this year considering that much less aquatic plant treatment took place. This is especially interesting since most other lakes in Ohio have had horrible algae problems due to the very hot and dry summer we've had.

Although 2010 was a relatively good year in terms of algae blooms and weed problems, both of these have been major problems in the past. Because of this the LMC is actively looking into ways to minimize these problems in the future and help ensure that Lake Roaming Rock will continue to provide excellent opportunities for swimming, boating and fishing for many years to come.