Wall Lake

Wall Lake is a beautiful, crescent-shaped body of water that lies entirely within Hope Township in Barry County, Michigan, just northeast of the Village of Delton. Its size is approximately 540 acres and its average depth is 15 to 20 feet with some locations up to 40 feet. There are about 320 homes and cottages around the lake.

DEVOTED TO THE MANAGEMENT AND WISE USE OF MICHIGAN'S LAKES AND STREAMS Published Quarterly

RIPARIAN (r-'per-EE-n) adj. Relating to or living or located on the bank of a natural watercourse, such as a river, or of a lake or a tidewater.

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Vol. 44 No. 3

THE MICHIGAN RIPARIAN

Michigan Lakes & Streams Foundation

Your Gift Lives Forever.

For 48 years, MLSA has provided all of these benefits and resources to its members and the citizens of Michigan on a limited budget – relying almost entirely on volunteers. If we are to continue to be effective as the leader in the state in protecting our water resources for future generations and continue to be your voice in Lansing and continue to defend your riparian rights ...

... We need Your Support!

What is the Michigan Lakes & Streams Foundation?

The Michigan Lakes & Streams Foundation is a 501(c)(3) nonprofit, charitable organization established in 2004 by Michigan Lake & Stream Associations, Inc. (MLSA) to provide an endowed fund) for developing a stable and permanent financing source to help support MLSA's many programs and initiatives.

Why an Endowed Fund?

An endowed fund ensures the principal from all gifts will always be there to help provide funding to MLSA. Only interest earned will be utilized. The principal will remain untouched.

Why Support ML&SA?

MLSA's membership consists of more than 300 Lakes & Streams Associations statewide, representing more than 100,000 members interested in protecting the future of Michigan's water resources. For 45 years, Michigan Lake & Stream Associations, Inc., has labored on your behalf - most likely without you even knowing about it. On a national, regional and state level, MLSA represents its members through involvement in a variety of programs and issues involving state waters. Some of the key issues MLSA is currently dealing with include:

• Riparian rights • Lake and stream water quality • Controlling invasive species • Lake/stream watershed management • Other MLSA activities - MLSA is actively supporting numerous programs; MLSA is also your voice in Lansing, representing you.

How Can I Contribute?

There are four ways you can make a difference in the future of Michigan's lakes and streams:

1) You can leave a percentage of your estate through your will to the Foundation. No matter what kind of assets are in your estate, and regardless of the value, the percentage you specify will be given by your personal representative. 2) You may also wish to name a fixed-dollar amount or other specific property as your gift. This ensures a definite gift regardless of other bequests. 3) After bequests are made to other heirs, you can leave whatever is left from your estate to the Foundation. This assures that others are taken care of first, but that something goes to the Foundation that is important to you. 4) Make a cash contribution any time.

Consult your own attorney or accountant for further ideas on the most appropriate way to make your bequest. For more information, contact Franz Mogdis, President of the Board of Directors of the Foundation, at 989-831-5261; or Pearl Bonnell, Treasurer of the Foundation, at 989-257-3583 or pbonnell@mi-riparian.org.

A Pro-Riparian Case

The Michigan Court of Appeals issued an interesting recent opinion in the case of *Sullivan v Tillman* (unpublished Court of Appeals Case No. 285195, dated June 2, 2009). The properties at issue were in a plat on Big Crooked Lake in Van Buren County. The plaintiff owned a lot which was separated from the lake by a narrow strip of land dedicated as a "beach" in the original plat. Adjacent to plaintiff's lot (and running along the side lot line) was an area dedicated as a "walk" which stretches from the road to the lake. Defendants owned an off-lake property or backlot. Defendants erected a dock at the end of the walk at the lake and moored boats at that dock.

Plaintiff filed a lawsuit in an attempt to force the removal of defendants' dock and boats at the terminus of the walk at the lake. In the lawsuit, the defendants also argued that the plaintiff's lot was not riparian, as the narrow property designated as "beach" was located between plaintiff's lot and the lake.

The Court of Appeals reached two important decisions in this case. First, the Court held that plaintiff's lot is a lakefront or riparian lot despite the fact that it is separated from the waters of Big Crooked Lake by the narrow dedicated beach area. The Court found that the area dedicated as a beach was actually an easement for beach purposes, such that the side lot lines of plaintiff's lot extended through and under the beach area and to the lake. The language in the plat dedication, which stated that the beach was dedicated "to the use of" the lot owners, did not transfer title to all of the property owners within the plat, but simply created an easement for beach purposes for all of the lot owners.

The second important holding in this case is that the walk is for ingress and egress purposes only to access the lake. Accordingly, defendants, as backlot property owners, are not riparian property owners and have no right to install or maintain a dock or boat moorings at the termination of the walk at the lake. The Court specifically held that overnight boat mooring is prohibited. The defendants were also prohibited from keeping storage containers on the walk.

Although this is an unpublished decision by the Court of Appeals and is not technically binding precedent, it nevertheless can be persuasive to trial courts throughout Michigan.

Letters To The Editor

Send letters to: The Michigan Riparian
304 East Main Street, Stanton, MI 48888
or e-mail to fmogdis@mi-riparian.org

Dear [Riparian],

As you may know, most of The Michigan Aquatic Managers Association's (MAMA) membership firms are involved in invasive aquatic plant control using or distributing EPA and MDA approved aquatic herbicides and algaecides. Several of our members also offer mechanical harvesting or are exclusively lake management consultants.

Over the last several years, and to the present, it has been MAMA's great pleasure to work with Michigan Lake and Stream Associations (MLSA) regarding issues where we have a common goal of protecting Michigan's natural water resources. Representing MAMA as a partner in the Michigan Inland Lake Partnership I have personally enjoyed working side by side with several members of MLSA, specifically Mr. Scott Brown and Ms. Pearl Bonnell.

As a foundation of our mutually beneficial relationship, we understand and appreciate MLSA's role as a very important "clearinghouse" for vital unbiased information regarding lake stewardship and nuisance aquatic plant control. We understand that The Michigan Riparian is an important tool in spreading this message throughout the state.

I'm writing to inform you of a concern we have regarding a statement made in the November 2008 issue of *The Michigan Riparian*, specifically in the "From the Publisher" section. In this section, an article was published entitled "Aquatic plant survey: A critical element in lake management" that, in summary, suggests to the reader that, while a bad idea to allow an herbicide applicator firm to perform a vegetation survey and make a plant control recommendation, it is a good idea, and in fact is recommended, that the reader contact a firm to do their vegetation survey. Of course, we all know that (the firm mentioned) specializes in Eurasian milfoil control using the experimental milfoil weevil.

While we agree with the writer's statement that a critical element in lake management begins with a quality and, implied, unbiased, aquatic plant survey, we do not understand and in fact are confused by the duplicitous nature of the writer's recommendation; that recommendation being to not use an herbicide applicator firm but instead contact (the firm mentioned).

In addition, but of equal concern, is the statement made inferring that having an aquatic applicator survey the lake is "like letting the contractor write the check" (paraphrased). We find this statement unnecessary and without merit.

We believe that a recommendation employing a lake consulting firm to do a vegetation survey that is unattached and unbiased toward a specific plant control strategy would have been more appropriate given the context of this article.

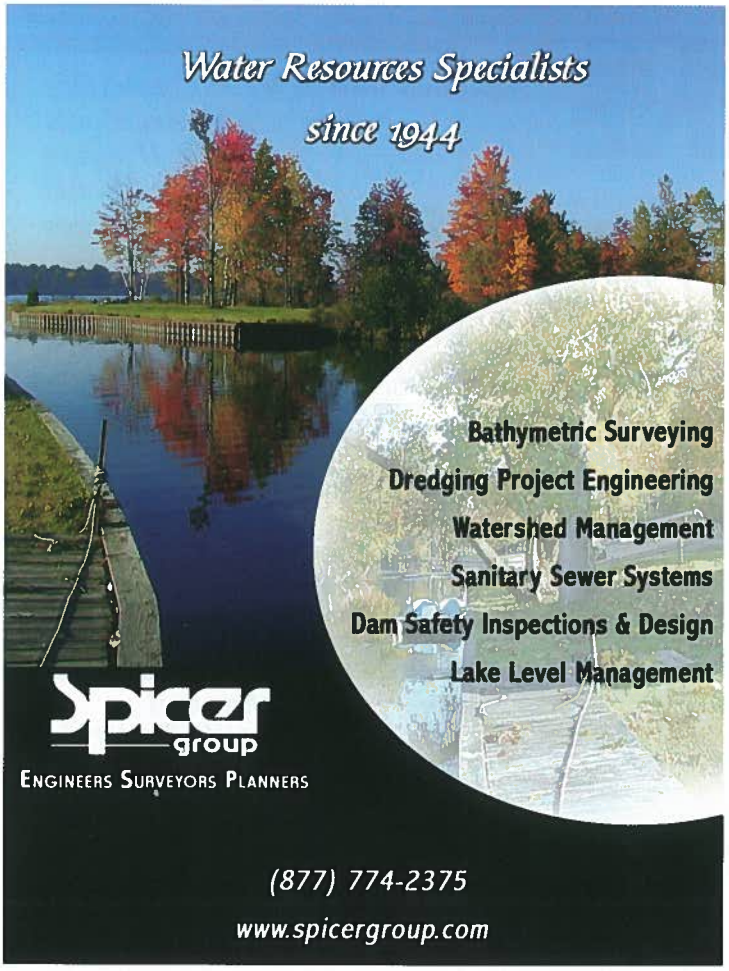
MAMA member aquatic herbicide applicator and mechanical harvesting firms are an important and proven resource for lake associations state-wide looking to control nuisance invasive aquatic plants such as Eurasian milfoil, curlyleaf pondweed, and, likely soon-to-be, hydrilla!

Of course we understand that nuisance aquatic plant control using herbicides is just one tool in the toolbox and not appropriate for all situations.

We look forward to continuing to work with MLSA toward the goal of general lake stewardship and invasive aquatic plant control.

Cordially,
Dick L. Pinagel, President
Michigan Aquatic Managers Association
www.mama-group.org

Bob Smith is President and Owner of Aerial Graphics of Grand Rapids. He often contributes our front cover photographs.



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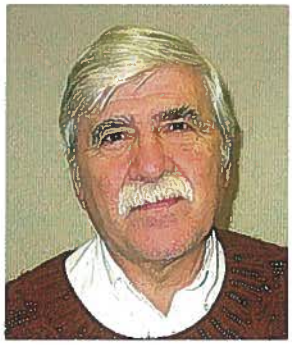
FROM THE PUBLISHER

Wrong Side of the Road?


Franz Mogdis

There have been some striking decisions in recent months regarding riparian rights. I urge you to read Cliff Bloom's "Attorney Writes" article on page 17 of this issue. The Michigan Lake & Stream Associations, Inc. and the Michigan Waterfront Alliance are co-sponsoring a statewide symposium/conference. The disastrous 2000 *Baum Family Trust v Babel Court of Appeals* decision will be the focus. The symposium/conference will be held on September 18, 2009, from 10 a.m. to 2 p.m. at the Ralph A. MacMullan MDNR Conference Center in Roscommon. Registration is $18 per person and includes lunch. Registration forms are available online at www.mlswa.org or by calling 989-831-5100. There will be speakers and discussions regarding the impact and implications of the decision, appeal issues, possible legislative solutions, and other matters. If you can attend, please send us your name, address, phone number, and e-mail address, accompanied by a check made out to MLSA. Mail this to: MLSA, 304 East Main St., Stanton, MI 48888. We urge you to pre-apply, although "walk-ins" on the day of the symposium will be accepted.

Thanks, as always, for your support of *The Michigan Riparian*. We always welcome your story ideas and feedback. As you can see with the Letter to the Editor we've published in this issue on page 5, we're happy to share your thoughts with our readers.

– Publisher
Franz Mogdis

– Editor
Jennifer Churchill

Biological Control of Eurasian Watermilfoil

By Tom Alwin
MSU Department of Fisheries and Wildlife
and Kendra Cheruvelil
MSU Department of Fisheries and Wildlife
and Lyman Briggs College

Eurasian watermilfoil (*Myriophyllum spicatum*), hereafter referred to as "E. milfoil," is an invasive exotic aquatic plant that, once introduced, can reach nuisance levels in ponds, lakes, rivers and reservoirs. Dense E. milfoil growth can alter the physical and chemical conditions of water bodies and drastically change fish and wildlife habitat. Dense E. milfoil beds can also impede swimming, fishing and boating. Also, E. milfoil accumulating at the water surface or broken E. milfoil stems collecting on shore can reduce the aesthetic quality of the lake. Significant amounts of time and money are invested in E. milfoil management because of these potential impacts.

Preventing E. milfoil introduction and early detection need to be the first lines of defense. However, if your water body is already infested with E. milfoil, then deciding on a control strategy may be the next step. Several methods are available for whole-lake E. milfoil control. Each method has pros and cons associated with it (see Table 1 for details). This publication focuses on one of these methods: biological control. Biological control is defined as the use of biological means (such as parasites, viruses or predators) to control a pest. The benefits of this approach are selectivity – the control affects only the target pest – and the potential for long-term control. Also, biological control is generally considered a natural and sustainable method of control. This bulletin provides general information on a native watermilfoil weevil, *Euhrychiopsis lecontei*, a commercially available beetle that has shown some promise as a biocontrol agent for E. milfoil.

Euhrychiopsis lecontei ("yoo-RICK-e-opsis la-CON-tee-eye") – the Milfoil Weevil

The watermilfoil weevil, hereafter referred to as "the weevil," is an aquatic beetle native to North America. Adult weevils reach a length of 3 millimeters (about the size of a sesame seed) and are dark-colored with brown to yellow stripes on their backs. They can be found from coast to coast in the northern United States and southern Canada. The weevil's natural host plant is a native variety of milfoil, but once it's exposed to E. milfoil, the weevil prefers it over native plants. This high affinity for E. milfoil means that weevils will have little impact on other aquatic plants. On E. milfoil, weevil survival and reproductive rates are high, and weevil populations can reach levels capable of controlling E. milfoil. On native milfoil plants, however, weevil numbers remain low, and they generally do not negatively affect the native milfoil population. Weevil survival on hybrids of E. milfoil and native milfoil is intermediate, and weevils' impact on hybrids is likely somewhere between their impact on native and invasive milfoils. In small-scale laboratory studies, milfoil weevils have been found to be effective at controlling E. milfoil. These results indicate that the watermilfoil weevil may be an ideal biological control agent for E. milfoil.

Life cycle of the weevil

The weevil life cycle – egg, larva, pupa, adult – is closely coupled to milfoil. Adults feed on the leaves and stems of milfoil, reducing the plants' ability to photosynthesize. Females can lay an average of two eggs per day on the growing tips of milfoil, and a maximum of five generations can be completed each summer. Of all stages of the weevil's life cycle, the larval stage has the largest impact on the plant. After hatching, larvae tunnel into the stem and eat the inner tissue. Their feeding interrupts the flow of nutrients through the plant. Lower nutrient concentrations in the roots may reduce E. milfoil's overwinter survival. Larval tunneling also creates holes in the stem walls, which release the gases that keep the plant upright. This reduced buoyancy can cause the plant to sink out of the water column and cause entire E. milfoil beds to collapse. Individual larvae then hollow out a pupal chamber in the upper portion of the plant (2 to 3 feet from the tip of the plant) to complete development. Pupal chambers, as well as the larval stem mining, have been found to increase stem breakage, but stem fragments that result from weevil damage rarely succeed in developing into new plants.

When the adult beetle emerges from the pupal chamber, it moves back to the E. milfoil canopy to feed and reproduce. Each season, the last generation of adults foregoes reproduction and instead stores fat for overwintering, which occurs in near-shore soil and leaf litter. During the spring, adults emerge from the soil and return to the water to reproduce. Because all weevil life stages feed exclusively on milfoil, the weevil may be particularly well-suited as an agent for E. milfoil biocontrol.

E. milfoil control, not eradication

Although the weevil can be an effective control agent for E. milfoil under some conditions, it will not completely eliminate E. milfoil from a lake. In fact, some remaining E. milfoil is an important component necessary for long-term E. milfoil suppression. If E. milfoil is completely removed from the lake, weevil populations will not persist, leaving the lake vulnerable to reinfestation. Therefore, some E. milfoil remaining provides resources to maintain a small weevil population that can keep the E. milfoil in check for years to come. As in most natural systems, the weevil-milfoil interactions can fluctuate from year to year. In years when conditions are particularly good for plant growth, the E. milfoil population may grow too fast for complete control. There may be a slight lag before the weevil population builds up in response and again suppresses the E. milfoil to a low level.

Factors that may limit weevil density

Although the weevil's life history and host specificity suggest that it may be a promising biocontrol agent, effective E. milfoil suppression depends on weevil grazing rates, which, in turn, are influenced by the total number of weevils present. Weevils can be found in many lakes at low densities, but they are rarely found in high enough numbers to control E. milfoil. So, if weevils are already present in a lake at low levels and there are abundant food resources (E. milfoil), why are

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populations not naturally increasing to a level that can control E. milfoil? Several explanations for this have been proposed, and research into these areas is ongoing. The following are possibilities.

Overwintering habitat

A lack of suitable overwintering sites has been suggested as a factor limiting weevil densities from one summer to the next. One study suggested that natural shoreline may be needed to maintain weevil populations through the winter months. However, overwintering was not the focus of the study, and the impact of shoreline type on overwintering could not be tested because each lake was sampled only once. In fact, several lines of evidence suggest that overwintering conditions may not affect weevil densities. First, 10 years of commercial weevil stocking efforts have not seen any sizeable differences in weevil population densities between lakes having natural shorelines versus lakes with developed shorelines (Hilovsky, Enviro-Science Inc., personal comment). Second, the weevils' high reproductive rate should allow small spring populations to reach high levels within a single season. Third, a study of two Minnesota lakes with natural shoreline determined that weevil densities were not limited by overwintering habitat.

The amount and type of habitat necessary for successful weevil overwintering are poorly understood. Additional scientific study on overwintering survival success in landscaped habitat (maintained lawn, flower beds, mulch, etc.) is necessary. Maintaining a wide buffer zone (25+ feet deep) of natural vegetation along the

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shore, where possible, may help weevil populations and may indirectly improve E. milfoil management by taking up incoming nutrients from the surrounding landscape and reducing nutrient availability for E. milfoil growth.

Predation

Predation by fish is another potential explanation for naturally low weevil populations and may also limit the effectiveness of weevil stocking efforts. Because larvae and pupae spend the majority of their time inside E. milfoil stems, they are protected from predation. Larvae are susceptible when they occasionally leave the stem, and within E. milfoil beds, adult weevils are exposed to predation.

Several studies have investigated the effects of fish predation on weevil populations. Neither black crappie nor yellow perch consumes weevils, but sunfish larger than 2 inches will eat the weevils. In fact, lower sunfish densities have been associated with higher weevil densities, and in Cenailko Lake, Minnesota, during the early 1990s, an unexplained decrease in sunfish density coincided with the weevil population reaching densities high enough to control E. milfoil. These studies provide evidence that sunfish consume weevils and may negatively affect weevil densities. Dense and complex E. milfoil beds, however, may limit predator success, provide a refuge for weevils and positively affect weevil densities. Computer modeling found that both the sunfish and E. milfoil density affect weevil density. No field studies to date have addressed the interactions between fish predation, E. milfoil stem density and weevil density, which may be an important factor in the weevils' ability to suppress E. milfoil.

Reproduction rate

Another potential explanation for small naturally occurring weevil populations is difficulty finding mates. At naturally low densities, weevils may have difficulty locating mates and reproducing, especially in dense E. milfoil beds. This situation is an area of weevil research that has not been investigated but may be important.

Milfoil hybrids

Hybridization between E. milfoil and native milfoil species can occur. In fact, reports of lakes infested with milfoil hybrids are increasing. These hybrid plants can possess the qualities of both species and pose a serious threat to the effectiveness of both weevil control and current herbicide treatments.

Improving biocontrol efforts: integrated pest management

Although natural weevil populations rarely reach the numbers necessary to control E. milfoil infestations without artificial augmentation, several approaches can be implemented to improve E. milfoil control using weevils. The following three management approaches can be applied to either increase weevil densities or reduce E. milfoil growth rates:

1. Conservation biocontrol modifies the existing habitat or management practices to conserve or enhance existing biocontrol agent populations. For weevils, three strategies discussed in detail below are reducing nutrient inputs that promote E. milfoil growth, practicing integrated pest management and reducing predation pressure.

- *Reducing nutrient inputs:* Reducing nutrient inputs to a lake will not directly benefit weevil populations but may be an important step in reducing E. milfoil growth over time. Nutrients entering a lake from the surrounding landscape act as fertilizer and encourage vigorous E. milfoil growth. Actions by the surrounding landowners to reduce nutrient input include applying lawn fertilizer as per manufacturer directions, not washing cars on the driveway or street, maintaining a buffer of "wild" vegetation at the water's edge and properly maintaining septic systems. For more information on these and other steps to reduce nutrient loading to your lake, check out Extension bulletin WQ57, "Lakescaping for Wildlife and Water Quality," published through the Minnesota Department of Natural Resources and available through the Michigan State University Extension Bulletin Office.
- *Practicing integrated pest management:* Biocontrol can be part of a strategy that also includes any combination of physical, mechanical or chemical control methods. Lake-wide herbicide application and harvesting are likely counterproductive to weevil populations because, in the short term, they eliminate E. milfoil and leave no food for the weevil. However, strategies such as targeted herbicide application or benthic barriers (light-blocking material anchored to the lake bottom) can be incorporated with biocontrol management practices. These applications can be beneficial in high-traffic areas (e.g., boat launches) or other areas not suitable for weevils and may lead to more rapid lake-wide E. milfoil control.
- *Reducing weevil predation:* Although it's often impractical at best, reducing the densities of predator sunfish may help increase weevil populations. Approaches that could be taken to decrease sunfish numbers include increasing the population of large fish (greater than 12 inches) that prey on sunfish (e.g., largemouth bass), either by reducing fishing pressure and/or stocking, or increasing fishing pressure on sunfish. More practically, a lake with high sunfish density may require a different stocking strategy or may not be suitable for use of weevils for E. milfoil control. Additional strategies that may be beneficial are limiting the production and spread of E. milfoil fragments (keeping boat traffic out of E. milfoil beds) and improving weevil overwintering habitat.

2. Inoculative biocontrol is intentional release of an organism as a biocontrol agent with the intent that it will multiply and control the pest for an extended period. Weevil stocking has been applied to many lakes, including 70 Michigan lakes during 1998-2006 (EnviroScience, Inc.), with varying degrees of success. Enhancing natural weevil populations is likely necessary in most lakes to achieve weevil densities high enough to control E. milfoil.

3. Combining the two strategies above will likely improve the success rates of E. milfoil biocontrol.

Conclusion

Evidence from laboratory research, 10 years of commercial stocking in Michigan lakes and multiple examples of E. milfoil declines attributed to weevils all suggest that weevils can be an effective biological control agent. However, the results of stocking efforts have been variable. In most cases, some decline in E. milfoil can be seen within one to four years, but in other cases, stocking efforts appear to be ineffective. More research on what limits weevil populations is necessary to improve control efforts using the watermil-

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foil weevil, and to determine where and under what circumstances weevils are most suitable for E. milfoil control.

FAQS: Frequently asked questions about weevil stocking

Q: *How many weevils are needed per acre of E. milfoil?*

A: This question is difficult to answer because each lake has a unique set of conditions. Even under controlled laboratory conditions, there is no consensus on the minimum number of weevils necessary to control E. milfoil. Therefore, the goal of stocking has not been to attain a specific density but rather to establish areas of the lake with permanent and ecologically significant subpopulations. The subpopulations can then spread and increase over time to achieve lake-wide suppression of E. milfoil. Establishing significant subpopulations typically requires several thousand weevils to be stocked in close proximity.

Q: *How long will it take to achieve lake-wide E. milfoil control?*

A: This is another tough question to answer. Many factors play a role in determining the time needed for control, including lake size, quantity and density of the E. milfoil, and the number of weevils stocked. However, in most stocked Michigan lakes, lake-wide control (not eradication) has been achieved in one to four years.

Q: *Will the weevils become a nuisance? Specifically, do they bite or swarm homes in the fall?*

A: The answer to these questions is no. Typically, the only sign indicating that weevils are present in a lake is the impact they have on E. milfoil. Early indicators of weevil activity include brown or blackened stems and stems that are collapsing or "candy-caning" in the water column.

Q: *What does it cost to stock the weevil?*

A: Weevils are stocked in increments of 1,000 individuals. The current market price is $1,200 per thousand. Stocking is often done over the course of several years, with the number stocked per year determined on a case-by-case basis. Making a direct comparison between weevil stocking and herbicide treatment is difficult. Herbicide treatment, determined by lake area and volume, has been estimated to average $80 to $350 per acre of E. milfoil (www.co.midland.mi.us/departments/extra.php?id=9&pid=513).

Q: *What time of the year is best for stocking?*

A: Mid-May through early August is best. Stocking weevils by midsummer allows several generations to be completed before overwintering.

Table 1. Methods for E. milfoil control.

Method	Effectiveness	Advantages	Disadvantages	Costs	Additional comments
Mechanical harvesting	Not effective	• Rapid results • Boat lane creation	• High cost to purchase harvester • Short-term relief, may need multiple applications per year • Generally not selective • Not useful in shallow areas • Cuttings need land disposal site • Resulting fragments may promote spread of milfoil	• High initial investment • Significant ongoing costs: equipment maintenance, labor, transport/disposal of cuttings	No permitting required
Herbicides	Highly effective	• Rapid control • Selective control • Some can be spot applied	• Reapplication required every 1-3 years • Certified applicator required • Restrictions may be associated with waters used for drinking and irrigation • Some milfoil populations are showing signs of herbicide resistance • Some non-target impacts are possible • Avoiding skin contact (swimming) for 1-2 days after application may be advisable	• High ongoing costs: chemicals, permitting, applicator fees	MDEQ permit required
Weevils	Effective, but some lake-to-lake variability	• Has the potential to provide long-term, sustainable control • Very selective, no non-target impacts • Environmentally friendly, uses native North American insect • High degree of flexibility in application and cost	• Not a quick fix – time lag of 1-4 years from stocking to control • May have limited usefulness in very high traffic areas • May not be appropriate for all lakes	• Variable cost, depending on number of weevils stocked • Generally less expensive than other methods over 3- to 5-year period	No permitting required in Michigan

To download this report and full citings, visit http://web2.msue.msu.edu/bulletins and search for "Water and Water Quality."

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.
MLSA NEWSLETTER

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William Scott Brown, EXECUTIVE DIRECTOR

FROM THE MLSA NEWSLETTER EDITOR: "OUR NATURAL DEBT"

– by Delavan Sipes

4,500 years ago, the world's most ancient civilization – Sumer – used sulfur dusting as the first pesticide used to protect crops. By the 15th century, arsenic, mercury and lead were being used; by the 17th century, nicotine sulfate. The 19th century brought more natural pesticides to bear; pyrethrum from chrysanthemums, and rotenone from the roots of tropical plants. In 1939, DDT became the pesticide du jour. The late 1940s and early '50s period was the beginning of the manufacture and use of synthetic pesticides. Pesticide use today totals 2.3 million tons per year. Unfortunately, pesticide use kills off micro-organisms important to the health of the soil.

The latest innovation is the introduction of genetic modification (GM) to plants, so that they become repellent to insects, or it kills them. The effect on humans is not yet known. GM corn and other grains were marketed without any testing of their effect on people. People have been led to believe that GM is no different from hybridization. This is an outright falsehood. Hybrids are the result of selective breeding; choosing parents with characteristics that will be dominant in the offspring. GM is the process of inserting genes from one species into another species. The effects on humans are unknown.

In addition, we have lost much of our fresh water to pollution sources. Raw sewage spills into streams. Excess drugs are excreted into sewers, and are untreated in sewage treatment plants. Atrazine – a powerful pesticide – runs off the land into the water. It has been shown to change the sex of fish, yet we still use these sources as our drinking water without a process for removing the atrazine.

We waste fresh water through poorly designed farm irrigation systems that allow excessive evaporation. We drawn down our aquifers beyond sustainability because we don't know what constitutes sustainability.

We lose nature's instrument for removing toxins from water – wetlands – by filling them in to create more agricultural land. But we lose agricultural land more rapidly than it is acquired because of the continued building and expansion of cities covering over viable farm land. We lose land to buildings, highways, parking lots, airports, malls, etc. All of these increase runoff and increase the probability of flooding. We build in flood plains without thinking of the consequences.

Water that is transported out of the watershed can not be recycled in that watershed, diminishing available fresh water. Sprinkling systems on a timer waste water – they do not know, for example, that it has just rained. If one inch of rain per week in summer is your average rainfall, that is sufficient in Michigan.

Excessive pumping of fresh water is especially harmful if it goes to a company that distributes it as a consumption item (water, soft drinks, beer). These companies also transport their products out of the watershed, which diminishes the supply of fresh water.

Finally, the world population is increasing and will soon be beyond sustainability. If you fear a celestial catastrophe; it is too late – the catastrophe is us.

BATTLE WON BY MICHIGAN CITIZENS FOR WATER CONSERVATION

Michigan Citizens for Water Conservation stopped Nestlé Waters North America, Inc.'s attempt to pump more water from a stressed stream and lake for its Ice Mountain bottled water in Mecosta County, Michigan, on July 6.

MCWC and Nestlé reached a settlement on the first day of a week-long hearing scheduled to resolve opposing claims on whether Nestlé's pumping should be reduced or increased under the criteria of a 2006 injunction order.

"Under this modified injunction order, Nestlé cannot pump more water from Dead Stream or Thompson Lake," said Terry Swier, MCWC President. "This new order completes one of MCWC's goals. Nestlé must reduce its pumping earlier in the spring and continue its low pumping rates during the summer months. This will leave more water in the system and should eliminate the more serious impacts to the stream that occur in drier years and summers."

MCWC won a major victory against Nestlé Corporation in 2003 when trial judge Lawrence Root shut down Nestlé's plan to pump 210 million gallons of water for its Michigan bottled water operations.

In 2005, the Michigan Court of Appeals affirmed a 2003 trial court ruling that Nestlé's pumping violated Michigan water law and in 2006 agreed to an injunction that allowed Nestlé to pump an average of 218 gallons per minute, as opposed to the 400 gallons per minute originally permitted by the state.

The modified injunction order reached by agreement yesterday will end the nine-year dispute and become a final and permanent injunction that reduces Nestlé's original intended water removal by 50 percent.

"Nestlé challenged the rule of law, but the rule of law has prevailed," said Jim Olson, joined by former U.S. Attorney for Western Michigan Michael Dettmer and Jeff Jocks (with the Olson, Bzdok & Howard, PC, a Traverse City law firm).

"This injunction ends the continuing legal battle of MCWC's struggle to protect Dead Stream, Thompson Lake and wetlands from excessive water extraction," said Swier. "Now it is time to turn to the task of assuring water remains owned by the public."

SPECIAL ASSESSMENT DISTRICT AT COREY LAKE

The St. Joseph County Board has declared a special assessment district around Corey Lake. County Commissioner Robin Baker will be in charge of setting up the district. That will be followed by a public hearing called by Drain Commissioner Jeff Wenzel. He will determine who is in Tier 1 (riparian property) and who is in Tier 2 (deeded access). After comments at the public hearing, Wenzel will make the decision regarding the two tiers. The last step will be to present the proposal to the county commission.

Normally, county and township governments are considered a beneficiary of the lake and are considered as Tier 1 taxpayers. However, the St. Joseph County Commission decided to exempt themselves from this assessment, as did the Fabius Township board. The township argued it receives no benefit from the lakes, since the township does not levy a millage and receives no property taxes. St. Joseph County does receive property taxes and benefits from the relatively high taxable values of lakefront property. The county commissioners chose to disregard that argument. – *from an article by Dennis Bradley, Corey Lake Association Treasurer, May 2009 newsletter, "The Corey Lake Breeze"*

WISE FERTILIZING FOR FUTURE BENEFITS

Storm drains guide water from our streets and yards into our lakes and streams. This is accompanied by lawn runoff which flows directly into our waters. While fertilizer may be good for your lawn, it is bad for our water. The same nutrients that make the grass grow cause weeds to flourish and algae blooms to be denser. Algae blooms use oxygen, which can deprive fish of oxygen needed to survive.

Go slow: Choose an organic or slow-release fertilizer. A slow-release fertilizer saves time and money. You need less fertilizer because nitrogen is released gradually to plant roots. *Buy low:* Select a fertilizer with low or zero phosphorous. Most lawns already have enough phosphorous. Excess phosphorous is the primary culprit of algae blooms.

Mow high: Make your lawn cheaper and easier to maintain by mowing high – three inches is the rule. Tall grass promotes root growth and shades out weeds. Let grass clippings fall back on the lawn. Clippings recycle nitrogen back to the soil, reducing fertilizer needs.

Sweep it: Fertilizer left on sidewalks washes into storm drains. Save money and our lakes and streams; sweep that fertilizer back onto the lawn.

Don't guess; soil test: A soil test will tell you how much, if any, fertilizer you need in your yard. Contact the Michigan State University Extension Service in your county for information.

Maintain a fertilizer-free zone: Fenton township's fertilizer ordinance states "no property owner shall apply, deposit, leave, maintain, place or use any fertilizer on any property within 50 feet of the shoreline of any lake, stream, river, county drains or any contiguous wetland."

A commercial fertilizer applicator must be licensed by the township. *–excerpted from the Silver & Marl Lakes May 2009 newsletter, "Shore Lines"*

FISH CRIBS FOR WALLEYE

Walleye are starving in Lake Gogebic in the Upper Peninsula because their primary food source, perch, is being depleted. In an effort to support the walleye population Dave Van Donsel is building fish cribs to increase the perch population. Lake Gogebic is void of weeds except at its two extreme ends. Shallows are rocky, but provide little protection for small fry because the bass come in and eat them. The fish cribs are providing a better habitat for the perch.

Van Donsel builds a framework 4'x4'x3', then covers the sides and top with cedar 1"x4" leaving a 2" spacing between boards. The inside is filled with brush to "sweeten" the site. The cribs are towed to the site where they are requested. Nine cement blocks hold the structure in place in about 15 feet of water.

Van Donsel and other volunteers put out nine cribs last fall and he has 13 more ready to go. Since the project began eight years ago, Van Donsel estimates there have been 30-50 cribs placed in the lake. They are permitted to install cribs through 2013. The project is financed by the Lake Gogebic Association, and the local chamber of commerce donated $1,000. Lake Gogebic is 18 miles long, 2-1/2 miles wide, has rock piles along the shoreline, and is deepest near shore, running 30-35 feet. In the middle the depth is about 20 feet. – *from an interview with Dave Van Donsel in July 2009*

WALLEYES FOR TOMORROW

Lake Winnebago in Wisconsin once had a thriving walleye population. Then several severely dry years resulted in little water in the upriver spawning marshes. The reduction in population was evident. That was the reason "Walleyes For Tomorrow" was created. It was assumed that something could be done to ensure that there were more consistent opportunities for walleyes to spawn. The operating format of the new organization was "Increased Production." Biologists in Oshkosh have measured the success of the program, and fishermen are pleased with the results. If your lake has a problem with walleye population, search the web for "Walleyes For Tomorrow."

FRESHWATER FISH REPORT

According to an article in the "Magician Lake News" (May 2009) about four out of 10 native freshwater fish in North America are in danger according to a major study by U.S., Canadian and Mexican scientists. The number of fish species in trouble has nearly doubled since 1989. Degradation of the freshwater habitat, in quality and quantity of water, is one cause. Invasive species also contribute to the problem. Among the species in trouble or extinct are minnows and darters vital to the food chain. Some of the vulnerable fish are those that provide recreational fishing. The study was reported in the "Journal of Fisheries" published by the U.S. Geological Survey. One of the causes of diminished populations is a virus that has appeared among the various Lake Michigan fish species. State and federal officials have banned the transport of fish and bait among lakes and require cleaning of boats, personal watercraft and fishing equipment in an effort to limit the spread of the virus.

50 FISH SHELTERS

On May 28, 30 stalwart guys and gals of the Hubbard Lake Sportsman and Improvement Association (HLSIA) built and dropped 50 fish shelters in Hubbard Lake at South Bay, Comstock Point and Church Hill Point. Viking Marine provided a pontoon to transport the shelters. Larry Marzean supplied a tractor, trailer and 10,000 pounds of field stone to anchor the shelters. Trailers were provided by Mike & Sons, Al Vichunas, and Dan Betlej to transport the rocks to the build sites. Twelve volunteers loaded the rocks, one by one, into the trailers.

Another 18 people provided additional help. For example, during the winter 100 frames were constructed which were covered with cedar slats at the launch site.

GPS coordinates were designated for the location of the fish shelters. The group guarantees that the shelters will be close to those coordinates. – *excerpt from the HLSIA News, July 2009*

CURIOUSLY HIGH COLIFORM

Pentwater Lake is generally having a good water quality year, but a curiously

high E. coli level in the North Branch of the Pentwater River has been noted. Sampling has been increased considerably along the stream length, but no cause has yet been found. Like many other lakes in the state, the biggest long-term concern is nutrient loading. They are monitoring nitrogen and phosphorous levels regularly. Available or reactive phosphorous (phosphates) continue to be found at the threshold of the detection limit, 0.005 mg/l (5 ppb; five parts per billion). When the phosphates are available they are taken up immediately by the algae, which in larger amounts of phosphates would create significant algae blooms.

SEND US YOUR NEWSLETTERS

Your newsletters are vital to all lake people. They can help inform others around the state about problems and solutions. Many problems are often common around the state, and timely information from your newsletter may be relayed to many lakes through this section of *The Michigan Riparian* magazine. Send a copy of your newsletter to: Editor, 5660 Woodland Avenue, Watervliet, MI, 49098. If your newsletter is available electronically, e-mail it to: Delavan1122@comcast.net. Please type "MLSA" in the e-mail subject line. Your help is appreciated.

HAMLIN LAKE, BIG SABLE RIVER

The Big Sable River feeds the waters of Hamlin Lake; therefore, the condition of the river is important to the health of the lake. So the Hamlin Lake Preservation Society has a special Big Sable Watershed Restoration Committee. This spring the committee has completed work on the first phase of the Large Woody Debris Project on the river. It has been proven on several West Michigan rivers that the addition of large woody debris (logs placed in the water at beneficial locations) is the most effective way to improve the habitat of the river without restricting recreational use. This spring, biologist Chris Pierce and local volunteers returned to several stream bank stabilization areas to plant shrubbery and grasses on areas where the vegetation has died. This is an annual task until the vegetation gets a desirable foothold and the site becomes maintenance-free. Volunteers also scatter-planted 8,000 brown trout in the Big Sable. This project has been ongoing for several years, thanks to dedicated volunteers. – *from the summer 2009 "Hamlin Currents"*

BOARD MEETING SNIPS

Dick Morey is asking for volunteer recruiting help. There was discussion regarding the need to establish contact with all environmental organizations in Michigan. • Scott Brown reported that 227 lakes are participating in the Cooperative Lakes Management Program (CLMP) in 2009. He said, "the Michigan CLMP is the second oldest in the nation and deserves every effort to keep it funded." • Jennifer Jones is working on a 100-page "Inland Lakes Management" book which will be available later this year. • Franz Mogdis reported the Central Office in Stanton is close to fully operational. All materials and equipment have been transferred to the office. The computers are online. Signs identifying MLSA will be on the building soon. • Reorganization of MLSA requires new procedures be created to handle business. These are being worked out. • Creation of a Media Relations Director was approved.

SPECIAL ASSESSMENTS

"TAKING CHARGE: Special Assessment Districts for Lake Improvement" is the topic of the fall conference presented by the Michigan Chapter of the North American Lake Management Society (McNALMS). The conference is focused on creating a greater awareness of collaborative lake management options such as lake improvement boards and township public works projects. The conference also provides networking opportunities for those interested in collaborative lake management. One of the three concurrent sessions is about lake boards and township projects and how to establish a collaborative management effort. A second session will cover public relations, grants, the Tax Tribunal, and running a meeting. The third session will cover lake ecology and management, providing lake board participants a better understanding of lake environmental issues. The conference will be at the Kettunen Center in Tustin on Friday, October 16. It begins at 9:30 a.m. Conference cost is $60. Register online or print out a payment form for mailing at www.mcnalms.org/newsandevents/conferences.html

MORE HELP NEEDED

We need volunteers in several regions to work with lake associations, helping resolve problems with the assistance of MLSA. Needing assistance are ... *Region 2:* Calhoun, Branch, Hillsdale, Jackson, Lenawee counties. *Region 6:* Oakland, Macomb, St. Clair, Lapeer, Sanilac, Huron, Tuscola counties. *Region 7:* Roscommon, Ogemaw, Isabella, Iosco, Clare, Arenac, Midland, Bay counties. *Region 10:* Otsego, Montmorency, Alpena, Crawford, Oscoda, Alcona counties. *Region 12:* Mackinaw, Chippewa, Luce counties. *Region 13:* Schoolcraft, Alger, Menominee, Delta counties. *Region 14:* Dickinson, Marquette, Baraga, Iron counties. To help preserve our fresh water through MLSA, contact Dick Morey at rdm@sisterlakescable.net.

On The Cover Wall Lake in Barry County

-submitted by Bill Wiersma

Wall Lake is a beautiful, crescent-shaped body of water that lies entirely within Hope Township in Barry County, just northeast of the Village of Delton. Its size is approximately 540 acres and its average depth is 15-20 feet with some locations up to 40 feet. There are about 320 homes and cottages around the lake. A large wetland to the southwest of Wall Lake filters water as it runs toward the lake.

According to legend, the Potawatomie built walls to aid in harvesting fish and piled rocks just below the surface. As the water levels dropped during the summer, fish were trapped in the shallow water behind the wall, making easy access for meals when needed. Two original walls were constructed; one on the northeast cove was removed in 1963. The second was located at the southeast cove near the base of Beechwood Point. In the mid-1900s, an original Native American dug-out canoe was discovered on the lake bottom. It was well-preserved and is currently on display at the Bernard Museum in Delton.

Wall Lake is known for swimming, sailing, boating and fishing. Two internationally sanctioned fleets have been registered with their national classes. Weekly races are conducted by the Wall Lake Yacht Club on both Snipe and Sunfish. Natural fish include perch, gills, bass, crappie, and pike.

In 1961, the Greater Wall Lake Association (GWLA) was formed as a non-profit corporation, dedicated to enhancing, preserving & protecting the quality of the lake and its watershed through the promotion of responsible and effective environmental and educational policy, and to encourage the preservation of the natural beauty of the lake.

A 16-member Board of Directors is interested in providing Wall Lake residents with the latest information available through:

- ❑ Board meetings scheduled several times per year, open to membership
- ❑ The annual GWLA meeting held in June
- ❑ The GWLA website which is available for additional timely information, www.geocities.com/gwla2006
- ❑ The GWLA newsletter mailed quarterly to all riparians and also available by e-mail and from the website

In 2008, two-thirds of Wall Lake residents chose to become members of the GWLA. The GWLA is a proud member of the Michigan Lake and Stream Associations. In 2007, the GWLA president invited the presidents of surrounding lakes to meet for breakfast and discussion on issues pertinent to lakes. The meeting was so successful, that a decision was made to meet quarterly with this group to discuss issues and share information. We have found that most of the area lakes encounter very similar problems and situations. Currently six area lake presidents meet on the first Saturday in February, May, September and November at a local restaurant.

Besides implementation of a sewer system and working to control invasive weed species, the GWLA conducts regular inspections of the outlet dam; two clean-up days yearly, in conjunction with the township and county and other yearly projects as deemed necessary. Social gatherings include 'Pastries on the Porch' (residents bring their favorite dessert to share), and the annual July 4th Boat Parade (residents are encouraged to decorate their boat and join the fun for a ride around the lake).

The *2000 Baum* Case Decision Disaster

By Clifford H. Bloom, Esq.
Law, Weathers & Richardson, P.C.
800 Bridgewater Pl • 333 Bridge St NW
Grand Rapids, Michigan 49504-5320

Imagine that five years ago, you purchased a lot on Crystal Lake across the road from the lake. Your lot is in a plat and both your lot and the public road right-of-way between the lot and the lake were created by the same plat. On the original plat, there was no intervening land shown between the lake and the public road right-of-way that runs along the shore.

Before you bought your lot, you were a bit concerned because the lot as shown on both a new survey and the original plat did not "touch" the lake; rather, the lot was shown as fronting on the road but stopping at the edge of the public road right-of-way. You consulted with an excellent real estate attorney who is well-versed in riparian law. She reviewed the plat and rendered an opinion (based on long-standing Michigan appellate case law) indicating that the lot was, in fact, riparian. No fewer than four published Michigan Court of Appeals decisions indicated that the lot was riparian, even though the lot itself was shown as only having frontage on the road—not the lake—and the side lot lines did not expressly extend to the lake on the maps. The four Michigan Court of Appeals decisions which supported your attorney's opinion that the lot was riparian were *McCardel v Smolen*, 71 Mich App 560 (1976), reversed on other grounds, 404 Mich 89 (1978); *Kempf v Ellixson*, 69 Mich App 339 (1976); *Michigan Central Park Assn v Roscommon Co Road Comm*, 2 Mich App 192 (1966); and *Sheridan Drive Assn v Woodlawn Backproperty Owners Assn*, 29 Mich App 64 (1970). In addition, the authoritative land title standards by the State Bar of Michigan also supported this view. (See Standard 24.5, Comment B.)

Based on your attorney's opinion and the long-standing case law, you purchased your lot and paid a premium for it as lakefront property. Since the date when you closed on the purchase of your lot five years ago, your lot has been taxed as riparian or waterfront property (with a slight discount in property taxes due to having to cross the road to get to the lake).

Now, the Michigan Court of Appeals' recent decision in *2000 Baum Family Trust v Babel* (Case No. 284547, issued on June 23, 2009) hits you like a ton of bricks. You are no longer a riparian or lakefront property owner. The value of your property has plummeted by 30%. The county road commission informs you that you must remove your dock and boat hoist from the water permanently. The county road commission has scheduled a hearing in a few weeks so that it can determine whether to install public docks and boat hoists along the lake frontage which was formerly your property. The road commission is also considering whether to allow backlot property owners to install docks and boat hoists there.

In the *2000 Baum* case, the Court of Appeals held that where a platted public road right-of-way was created pursuant to Michigan's 1887 plat statute, there was no intervening property shown on the original plat between the road and the water, and there exists a "first tier" of platted lots along the road opposite the lake, those first-tier lots are not riparian. The Court of Appeals essentially held that under the 1887 plat statute, the local county road commission or other government road authority "owns" the public road right-of-way.

There is another aspect of the opinion by the Michigan Court of Appeals in *2000 Baum* which is problematic. In Michigan, the appellate courts have long held that public road rights-of-way created by plat dedication for street, road, alley and boulevard purposes can be used for travel and road purposes only. And, in a variety of different contexts, it is well-settled case law in Michigan that public road rights-of-way at lakes cannot be used for nontravel purposes such as lounging, sunbathing, picnicking, private dockage, permanent boat moorage, and similar matters. See *Jacobs v Lyon Twp* (after remand), 199 Mich App 667 (1993), and *Higgins Lake Property Owners Assn v Gerrish Twp*, 255 Mich App 83 (2003). However, the Court of Appeals in *2000 Baum* seems to indicate that, given its view that the local road commission (or the equivalent) now owns platted public road rights-of-way along lakes, the uses that can be undertaken or authorized by local road authorities are virtually unlimited. That is directly contrary to long-standing appellate case law. It is possible that such portion of the court's decision could be considered dicta – language that is not essential to a court decision and which is not binding precedent. However, until and unless the Michigan Supreme Court addresses the *2000 Baum* case, look for backlot property owners and their advocates throughout the state to assert that the *2000 Baum* published opinion somehow overturns *Jacobs v Lyon Twp* and dozens of other Michigan Court of Appeals cases which stand for the proposition that public road use is limited and for travel purposes only (i.e., no private docks, permanent boat mooring, lounging, sunbathing, etc.). Furthermore, if the Michigan Supreme Court decides to review the *2000 Baum* decision, it is likely that backlot groups will not only urge the Supreme Court to uphold the *2000 Baum* decision in general, but to also utilize the case to overturn *Jacobs v Lyon Twp* and many other related Michigan Court of Appeals cases.

Is this just a bad dream or nightmare? No. Many people who were formerly riparian property owners are awakening to this very real situation. Unless the Michigan Supreme Court reverses the June 23, 2009 published opinion by the Michigan Court of Appeals in the *2000 Baum* case, this nightmare scenario for many former riparian property owners will become permanent. Until and unless this decision is reversed by the Michigan Supreme Court, it is binding precedent throughout Michigan.

Perhaps the most perplexing matter about the *2000 Baum* decision is the fact that it totally ignores prior long-standing binding Michigan Court of Appeals precedent. At least four prior Michigan Court of Appeals published case decisions were directly on point and held that first-tier

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LOVE MY LAKE ... Linda Tucker and Lake Sherwood

My name is Linda Tucker and I have lived on Lake Sherwood, northwest of Detroit in Oakland County, for 15 years. I joined the board in 1997, became Lake Committee Director in 1999, VP in 2004 and President in 2007 of our 630 resident homeowners' association.

Lake Sherwood is 258-acre man-made private lake with six islands – three with docks, picnic tables and grills. There are 17 greenbelt parks and/or access lots and one private boat ramp. There are many natural habitats for birds, turtles, deer, and coyotes. With 12 miles of shoreline, we are 925 above sea level.

There are many reasons why I love Lake Sherwood, but the best one is that there are no cottages. The entire lake was created and developed for year-round homes close to work. It is a deed-restricted community; we are able to keep our yearly dues low and our amenities high. Because our mostly sandy-bottom lake is shallow and is prone to weed growth, we have an aquatic weed treatment program. However, this same shallow lake allows for an extended water sport season of warm water. One feature of the lake is that fast sports are restricted to the main lake, enabling the canals to be reserved for no-wake cruising, fishing, kayaking, etc. This allows people to purchase a home on a quiet canal or a water sports main lake. In fact, many residents have moved from the main lake to a canal, a canal to the main lake, or to buy a bigger place or maybe downsize, but never consider moving away. Even snowbirds come back, far into their senior years.

We are the only lake that we know of that has one association with everyone having water access, including all our off-water residents (there are 11 lots with 149 docks for off-water residents which makes key-holing work), so technically everyone in our association is a riparian by strict definition.

In each issue of *The Michigan Riparian*, we invite readers to tell us why they love their lake and to share one or two photographs. If you'd like to feature your lake in a future issue, please write and tell us why you love your lake via e-mail to **jchurchill@mi-riparian.org** or via "snail mail" to: Love My Lake c/o Jennifer Churchill, P.O. Box 44, Carson City, MI 48811. Please e-mail a large-format (300 dpi) jpg photo of your lake, or snail mail a regular photo.

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lot owners in situations virtually identical to the *2000 Baum* case are riparian/lakefront property owners. Even though the Michigan Waterfront Alliance filed an amicus curiae brief on behalf of the first-tier lot owners before the Michigan Court of Appeals reached its June decision in *2000 Baum* (and expressly cited the prior cases of McCardel, Kempf, Michigan Central Park Assn, and Sheridan Drive Assn), the Michigan Court of Appeals simply disregarded that prior case precedent and did not even mention or attempt to distinguish those cases in its *2000 Baum* decision.

It should also be kept in mind that the *2000 Baum* decision does not just apply to public roads that have actually been utilized or have an existing roadbed (whether of asphalt or gravel). There are hundreds, if not thousands, of "paper plat" public road rights-of-way around the state which run along the shorelines of Michigan lakes that have never been opened, improved or utilized. Nevertheless, they still exist as a public road right-of-way and are subject to the *2000 Baum* decision if created via the platting process.

If the decision by the Court of Appeals in the *2000 Baum* case stands, will some first-tier lot owners be able to continue to maintain their docks, boat hoists, and boat moorings by claiming adverse possession or prescriptive easement rights? That is unlikely because dockage and boat moorage rights via adverse possession/prescriptive easement cannot normally occur as against a public road right-of-way.

My column in the May 2009 issue of *The Michigan Riparian* discussed the *2000 Baum* case just prior to oral arguments before the Michigan Court of Appeals. Please consult with that column for a more in-depth factual review of the 2000 Baum case. At the time that column was written, I believed it was highly likely that the Michigan Court of Appeals would reverse the trial court's decision (which also held that first-tier lot owners were not riparian). The Court of Appeals recent decision in the *2000 Baum* case greatly surprised me and many other riparian experts.

The *2000 Baum* decision has the "feel" of two earlier Michigan Court of Appeals published decisions, which were ultimately reversed by the Michigan Supreme Court. First, in *Fox & Associates v Hayes Twp*, 162 Mich App 647 (1987), the Court of Appeals held that local governments cannot adopt zoning regulations which govern new keyhole or funnel developments. The Court of Appeals held that local zoning powers only extended to land, not water. The Michigan Supreme Court easily reversed that decision in *Hess v West Bloomfield Twp*, 439 Mich 550 (1992).

Second, and more recently, the Court of Appeals held in *Tomecek v Bavas*, 276 Mich App 252 (2007), that circuit courts could alter substantive property rights pursuant to plat vacation, alteration and correction lawsuits. Likewise, the Supreme Court reversed that erroneous interpretation by the Court of Appeals. See 482 Mich 484 (2008). Hopefully, the Michigan Supreme Court will hear and also reverse the Court of Appeals decision in *2000 Baum*.

To find out more about the *2000 Baum* decision and its dramatic implications, please visit the ML&SA website at www.mlswa.org to review a copy of the *2000 Baum* decision, the amicus curiae brief submitted by the Michigan Waterfront Alliance to the Court of Appeals before its decision, and related matters.

Michigan Waterfront Alliance

A unified voice to protect Michigan's Lakes and Streams.

MWA

Members Receive: Protection of their Riparian Rights by professional lobbyists in Lansing * MWA Newsletters sent by 1st class mail * Lobbyist Reports * Testimony at important legislative hearings on behalf of Riparians *Email Action Alerts * Amicus Briefs and much much more.

Waterfront owners are the final defense of their Lakes and Streams.
The MWA is the waterfront voice in Michigan Politics

Annual dues for individual membership in the Michigan Waterfront Alliance are $50.00 per year. Dues for Lake or Stream Associations are $100 per year. Commercial and individual donations are needed and appreciated.

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Make checks Payable to Michigan Waterfront Alliance

Send Dues and Contributions to: Michigan Waterfront Alliance, PO Box 369, Fenton MI 48430

☐ I am not ready to join yet. Please send me more information.

Learn More About Lake Improvement Boards

submitted by Howard Wandell
Michigan Lake & Stream Associations member

With state resource management funds rapidly diminishing, local communities and citizens have a greater stake in lake management. If a community's valuable lake is to maintain its quality and not be degraded by pollution and overrun with exotic species, concerned citizens and local governments must collectively take action. There are things that individuals and single agencies can do to protect a lake, but the greatest benefits will be realized if everyone works together.

Lake Improvement Boards - Authority

Lake Improvement Boards (*Part 309 of the Michigan Natural Resources and Environmental Protection Act – Public Act 451 of the Public Acts of 1994, as amended*) are local partnerships between local government and citizens to protect important local lake resources. Lake Improvement Boards bring together neighboring stakeholders and agencies to oversee management of the local lake. They are enabled by state law to: 1) determine the work necessary to protect the lake, 2) collect taxes to pay for a project, and 3) have public works authority to implement the project. Unfortunately, many communities are not familiar with the Lake Improvement Board management option; others may have heard of them but don't know how they work. Even some communities that do have Lake Improvement Boards have no network to share issues and assist efforts.

The Lake Improvement Board has the authority to undertake many types of improvement projects, including:

- elimination of pollution
- elimination of flood damage
- elimination of water conditions that jeopardize the public health or safety
- improvement of a lake for conservation of fish and wildlife
- improvement of a lake for fishing, wildlife, boating, swimming or any other recreational, agricultural or conservation use

Establishing a Lake Improvement Board

A Lake Improvement Board may be initiated by the local government board by resolution or in response to a petition from residents. If an improvement project is initiated by a petition, the petition must by signed by 2/3 of the freeholders owning land abutting the lake. Upon receiving the petition, the township board passes a resolution:

- authorizing the creation of the lake improvement board
- authorizing the lake improvement board to determine the scope of the project
- authorizing the lake improvement board to establish a special assessment district to pay for the project

Lake Improvement Boards Consist of

- a member of the county board of commissioners
- the county drain commissioner
- a representative for each local unit of government in which the lake is located, if there is only one local unit of government then that unit would appoint two members
- a property owner, appointed by the Board, who owns land abutting the lake

A Lake Improvement Board must retain a registered professional engineer to provide a feasibility report. This report should include a project recommendation, an estimate of cost, and an economic report delineating how project costs will be covered, including the special assessment district's boundaries. Upon receipt of the feasibility report, the Board schedules a public hearing to receive comments on the proposed project and special assessment district.

A Public Hearing for the Project

At a public hearing, the Lake Improvement Board receives comments regarding the project and the special assessment district. From the comments received, the Board may modify the project plans, cost estimates or the special assessment district. If the Lake Improvement Board decides to proceed with the project they pass a resolution to:

- complete the project
- approve the plans and cost estimates
- determine the sufficiency of the petitions
- determine the special assessment district
- direct the township supervisor to prepare a special assessment roll

Special Assessment Roll Public Hearing

The Lake Improvement Board sets a time and place for a public hearing to hear objections to the special assessment roll and gives notice of the hearing in a newspaper of general circulation and by mail. The Board may approve the roll by resolution or refer it back to the township supervisor for revisions or direct a new roll to be made. Once the assessment roll resolution is confirmed, it is considered final unless challenged in a lawsuit within 30 days after notice of confirmation has been published.

Implementing the Project

The township treasurer is instructed to collect the special assessments. For the sake of convenience, the special assessment is often placed on the tax bill. The Lake Improvement Board may wait until the special assessment taxes are collected to sign contracts and initiate the project. In order to begin the project before collection of the special assessment taxes, the county or township board may create

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Greater Local Involvement in Lake Management Needed: Plan To Attend October 16 Conference

The Lake Improvement Board Conference will be held Friday, October 16, at the Kettunen Center near Tustin, Michigan. Cost is $60 per person. The conference will offer three concurrent sessions: one focusing in general on Lake Improvement Boards, one focusing on public relations, grants and running meetings, and one focusing on lake ecology and management. To learn more and to register, visit www.mcnalms.org.

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a revolving fund, which the Board may borrow funds from and repay upon collection of the special assessment taxes. The Board may also borrow money from a local lending institution or issue lake-level orders, which are promissory notes issued to the contractor that promise payment upon collection of the special assessment funds. For large and expensive projects, the lake board may issue bonds to borrow money to begin the project.

The Lake Improvement Board must advertise for bids and let the contract to the lowest bidder giving adequate security for performance of the contract. The Board may contract with a local homeowner association without advertising for bids if the association can provide adequate security for the performance of the contract.

Dissolution of the Lake Board

If certain conditions are met, the local government board may hold a hearing to dissolve the lake board.

Conference Planned for October 16

To help promote lake management and a network between community lake management efforts, a one-day conference on Lake Improvement Boards is planned for October 16, 2009. The conference is a project of the Michigan Inland Lakes Partnership, itself a partnership of state and local agencies, Native American Nations, outreach institutions (universities and other educational institutions), non-governmental organizations (NGOs), as well as business and industry trade groups. The partnership's purpose is to promote communication and cooperation among partners, communities and citizens interested in lake management, educate local leaders who will advance lake management, and strengthen lake stewardship.

The conference is hosted by the Michigan Chapter of the North American Lake Management Society. Other co-sponors are Michigan Lake and Stream Associations, Inc., the Michigan Association of County Drain Commissioners, the Michigan Township Association, Michigan State University Extension, MSU Institute of Water Research, and the Michigan Aquatic Managers Association.

About the Conference

The purpose of the conference is to create a greater awareness of lake management options such as lake improvement boards and township public works projects and to provide a networking opportunity for those interested in lake management partnerships. The conference will have three concurrent sessions. One session will provide information about Lake Improvement Boards. The second session will cover topics such as public relations, grants, the Tax Tribunal and running a meeting, which will help existing Lake Improvement Boards. The third session will deal with lake ecology and management, which will provide Lake Improvement Board participants a better understanding of lake environmental issues.

The conference will be held at the Kettunen Center near Tustin, Michigan, south of Cadillac. For those that arrive the early or live nearby, there will be a reception at the Kettunen Center the evening before the conference. The cost to attend is $60 per person. Lodging at the Kettunen Center is $59.75 and includes breakfast. The Cadillac Holiday Inn Express and the Comfort Inn have both set aside rooms for the conference. Additional information is available on the web site www.mcnalms.org. Participation is limited to 150 individuals.

Standing The Test of Time: What We Believe

by Scott Brown, Executive Director
Michigan Lake & Stream Associations, Inc.

The Random House American Dictionary defines the word transition as a "passage from one condition to another." Let there be no question, any organization that has experienced the departures of folks like Don Winne, who served as our Executive Director for over 30 years, and Pearl Bonnell, who served for nearly as long as our Director of Operations and Treasurer, as well as the subsequent closure of two major offices and the establishment of a new Central Office in Stanton, Michigan, easily qualifies as an organization that has prevailed in meeting the challenges of a successful transition. I'm convinced we were able to achieve the many milestones of our recent "passage" because we all share a common vision and unrelenting dedication to the mission of Michigan Lake and Stream Associations. While the MLSA team may have had intense discussion and, at times, disagreement over the logistics and timing of our transition, there was never any question about the continued relevance of our mission and goals which were established by the founders of MLSA almost 50 years ago. While names, faces and places may change, the values and beliefs that remain at the core of our organization have not wavered.

- *We believe that the people of the great state of Michigan have the ability to create a bright and prosperous future for themselves and for future generations.*
- *We believe that Michigan's vast treasure of freshwater resources will play an increasingly important role in our state's economic, political and cultural future.*
- *We believe in the important role of lake and stream associations. The founders of MLSA understood that the most effective way to accomplish the preservation of our freshwater resources and the protection of our riparian rights is through the creation of community-based citizen partnerships working together to accomplish good things for their lakes and streams, as well as their respective communities.*
- *We believe that one of our most important roles is to strengthen citizen support for preserving and effectively managing our natural inheritance of lakes, rivers, streams and wetlands.*
- *While we believe that government plays a critical role in preserving and protecting our natural resources, we recognize that it will be the contribution of individuals and the collective actions of our state's citizen stakeholders that will ultimately prevail in accomplishing this goal.*
- *We believe in the power of education – one of our most important roles over the years has been to build bridges between Michigan's riparian communities and our state's great universities.*
- *We believe in collaborative partnerships. We come to the table ready and willing to contribute our organization's unique experience and humble resources to building a better future for people of the state of Michigan.*

Shorelands Management for Lakefront Property Owners

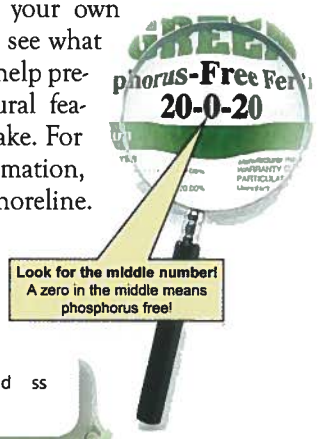
by Tony Groves
Water Resources Practice Leader, Progressive AE

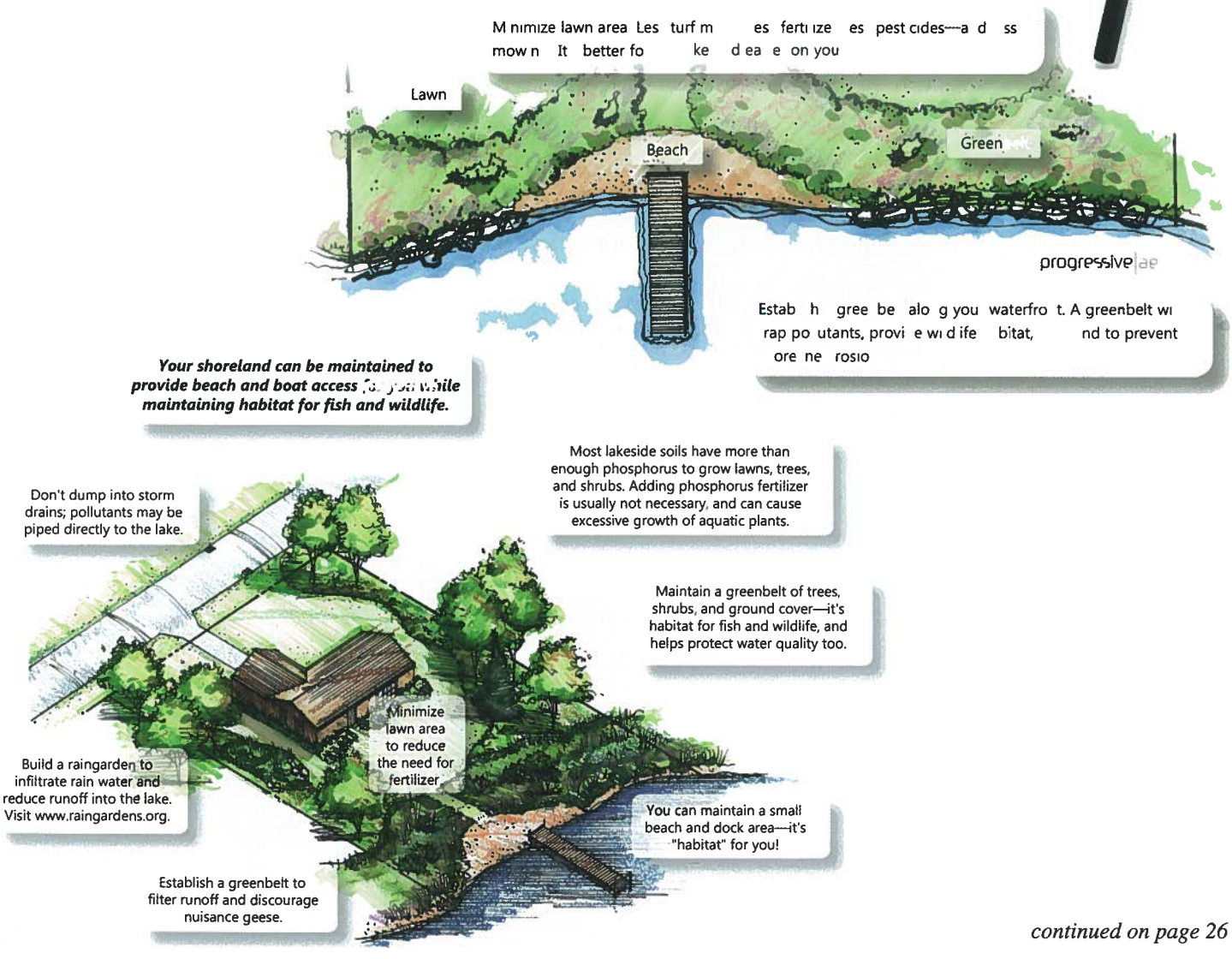
Proper shoreland management is vital to protect both water quality and fisheries. During pre-settlement days, much of the shoreland around lakes was forest, wetlands, or grassland. Natural habitat was abundant. Over time, as shorelands were developed, much changed. Natural areas were cleared. Roads and houses were constructed.

Shoreland vegetation was removed. Today, if you survey your shorelands, most of the natural areas are gone. Valuable fish and wildlife habitat has been lost. Natural areas that allowed rain waters to infiltrate have been replaced by rooftops, roads, driveways, and other hard surfaces. Now, rather than infiltrating, storm water runs off these hard surfaces, often carrying fertilizer, oil, and other pollutants to the lake. Adverse impacts associated with excessive shoreland development include increased aquatic plant growth, diminished fisheries, and poor water quality. How we manage our shorelands can have a direct and profound impact on the quality of our lakes. If we want to sustain healthy lakes and fisheries, we need to maintain some natural shoreline! The approach is straightforward: Maintain or restore as much natural shoreland as possible. That is not to say that you can't – or shouldn't – have an area to swim, moor boats, fish or lounge by the shore. However, manicured lawn to the water's edge and boundless seawalls are not conducive to healthy lakes, nor is large-scale removal of aquatic vegetation.

Another issue in shorelands is the application of lawn fertilizers, especially fertilizers containing phosphorus. Phosphorus is the nutrient that most often stimulates excessive growth of aquatic plants and causes premature lake aging. Fertilizers should only be used sparingly, if at all. If you must use fertilizer, only use a phosphorus-free fertilizer. Once in the lake, a pound of phosphorus can generate hundreds of pounds of aquatic vegetation. This vegetation is most evident in the near-shore areas of the lake where we swim and recreate.

Take a look at the following illustrations. Then look at your own shoreland and see what you can do to help preserve the natural features of your lake. For more information, visit www.shoreline.msu.edu.





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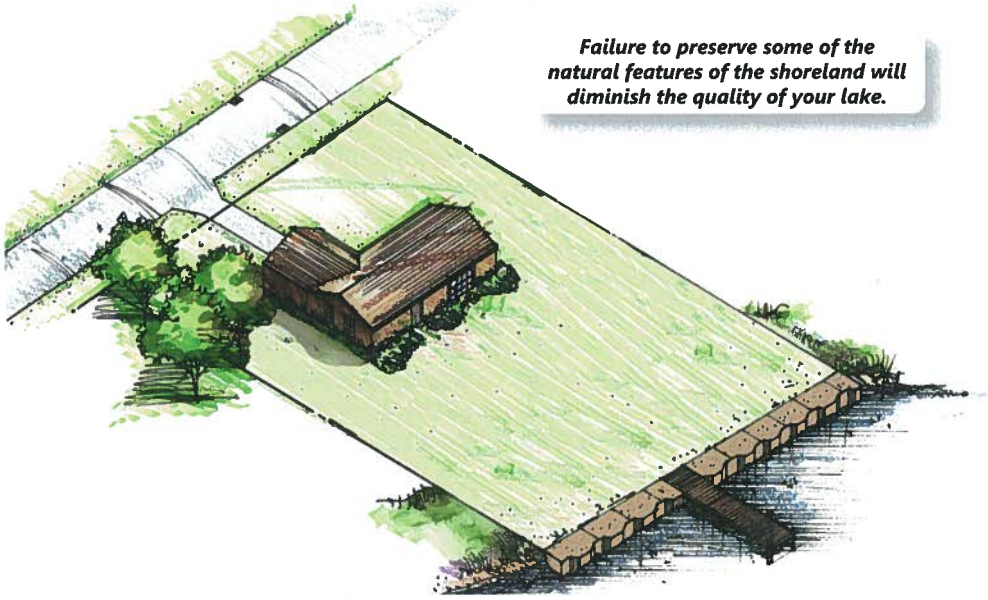


Failure to preserve some of the natural features of the shoreland will diminish the quality of your lake.

Aquatic plants are part of a healthy lake. They produce oxygen, provide food and habitat for fish, and help to stabilize shoreline and bottom sediments.

Insects and other invertebrates live on or near aquatic plants, and become food for fish, birds, amphibians and other wildlife.

Plants and algae are the base of the food chain. Lakes with a healthy fishery have a moderate density of aquatic plants.

Trees and shrubs prevent erosion and provide habitat.

Aquatic plants provide habitat for fish and other aquatic life.

Roots and stones absorb wave energy and reduce scouring of the lake bottom.

Aquatic plants help to hold sediments in place and improve water clarity.

Predator-fish such as pike hide among plants, rocks, and tree roots to sneak up on their prey. Prey-fish such as minnows and small sunfish use aquatic plants to hide from predators.

Seawalls deflect waves and cause scouring of the lake bottom.

Scouring of the lake bottom reduces water clarity.

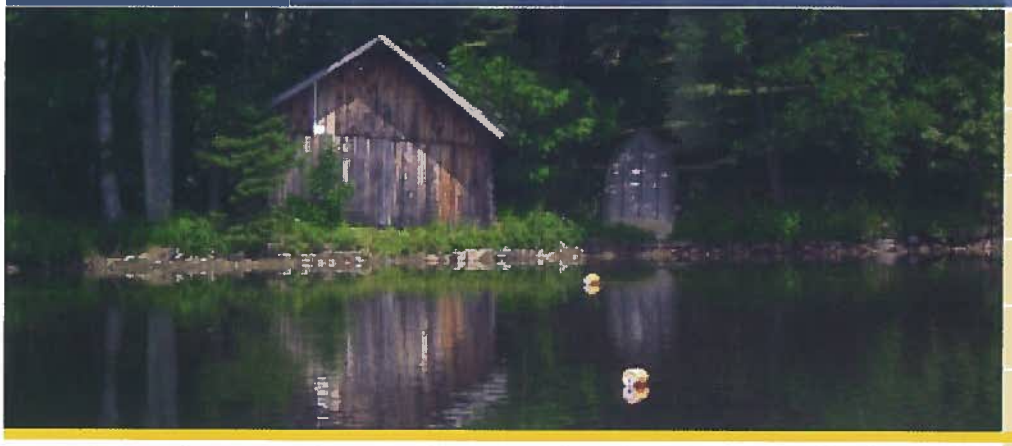
Seawalls impede the migration of frogs and other amphibians to shore.

The nuisance exotic plant Eurasian milfoil often invades disturbed lake bottoms, such as areas along seawalls.

Excessive plant control reduces habitat, impairs water quality and is not healthy for the lake.

Seawalls do not provide habitat for fish or other aquatic life.

MIDDFOIL® Controlling Invasive Eurasian Watermilfoil



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Problem With Milfoil? We Have the Solution

EnviroScience offers the most effective, long-term method available for controlling the invasive Eurasian watermilfoil (EWM). Known as MiddFoil®, the process increases local populations of a native beetle that is a known predator of EWM. The beetles feed and multiply on the stem of the weed, which ultimately reduces the EWM below problematic levels. The Milfoil beetle does not damage native vegetation or property, and the population is regulated by the amount of food (milfoil) available. Best of all, MiddFoil® is environmentally safe and can be incorporated into your current aquatic plant management program. If you are looking for an economical, effective, and long-term solution to control EWM in your lake, pond or stream, then call one of our biologists and ask about the MiddFoil® process.

Milfoil weevil, E. lecontei

EnviroScience biologists surveying the problem

EnviroScience's state-of-the-art culturing facility

NEWSFLASH! Recent changes have made Middfoil® programs more affordable than ever.

MIDDFOIL® ADVANTAGES

- Provides long-term control
- Does not interfere with recreation or other water body uses
- Environmentally and ecologically sound
- No chemicals
- No maintenance
- Versatile; can be implemented in large and small water bodies
- Cost efficient
- Supported by university research and numerous peer-reviewed journal articles

ALTERNATIVE METHODS

- Chemicals are short term, expensive, and can be detrimental to the environment. Most herbicides need to be reapplied each year.
- Mechanical cutting or harvesting produces numerous fragments, which actually causes EWM to spread more quickly.
- Dredging is extremely costly.

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