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THE MICHIGAN RIPARIAN

www.mi-riparian.org

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

Published Quarterly – February, May, August and November

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.

Burt Lake

Burt Lake is located in Cheboygan County, Michigan.
It is the third-largest lake in the state, with 17,334 surface acres.

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Cover photo is courtesy of Burt Lake property owner and photographer Albert Sickinger.

FROM THE PUBLISHER

Don Winne

Easements: right or license?

An easement is a right of access, or a license to use another person's land to get to or return from a shoreline property. A riparian property owner is a person who owns the shoreline of a natural body of water, and with the ownership has a bundle of "property rights" exclusive to riparian ownership. These rights include the right to use the water from the lake or stream for domestic purposes, such as to quench one's thirst, etc. The riparian owner also may install a dock and moor a boat on his bottomland.

In a number of court cases, the trial court has erred in declaring that the easement holder also enjoys riparian rights in the easement strip of land. An example is the decision of the Lenawee County Circuit Court in granting a back lot owner the right to construct a dock and permanently moor a boat at the termination of an easement to Sand Lake in Franklin Township. The appeals court that heard this case disagreed with the trial court, stating that the easement did not permit the defendant to construct a dock and permanently moor a boat at the terminus of the easement.

In another case, in Cass County, the backlotters claimed that they had acquired a prescriptive easement right through open and notorious use of the deeded easement for the statutory period of 15 years. The court declared that adverse possession could not be claimed in a dispute involving an easement.

To avoid confusion, an easement should be viewed as a license to walk over another person's parcel of land, but does not confer ownership rights and, therefore, does not confer any property rights.

PUBLISHER DON WINNE

IN THIS ISSUE

Second annual MiCorps Conference: empowering Michigan's volunteer water quality monitors

The second annual Michigan Clean Water Corps (MiCorps) conference will be held October 2-3, 2006, at the Ralph A. MacMullen Conference Center in Higgins Lake, Michigan. The conference is intended for lake and stream volunteer monitoring program leaders, citizen volunteers, and water resource professionals, and is an excellent opportunity to gather together and share ideas about volunteer monitoring.

"The MiCorps conference provides Michigan volunteers the opportunity to share their knowledge and experience with each other and to be recognized for their hard work and dedication to our rivers, lakes and streams," said Ric Lawson, MiCorps Project Manager with the Great Lakes Commission.

The two-day conference will feature presentations from regional experts and provide training for beginning and advanced monitoring programs. Other topics will include getting started in volunteer monitoring, recruiting and retaining volunteers, managing and using data, fundraising, and designing a monitoring strategy. Emphasis will be placed on the connection between lake and stream monitoring, and a special session is being designed to focus specifically on lake monitoring.

Representatives from the Michigan Department of Environmental Quality will review trends in water quality in Michigan's lakes and rivers and discuss the role volunteer monitoring data plays in supporting water quality protection efforts. Dr. Mike Wiley, Professor of Natural Resources at the University of Michigan, will provide the keynote address, discussing trends in Michigan rivers and presenting projections of the future of our rivers for the next 24 years, highlighting where changes in stream conditions are expected and how volunteer monitoring data can be used to respond to these changes.

Volunteer monitoring programs are invited to showcase how they use monitoring data and public participation to encourage local change, illustrate effective strategies for recruiting and sustaining volunteer monitors, or discuss other accomplishments in the volunteer monitoring field. Selected presentations will be made in conference breakout sessions and others will be invited to present posters. If you are interested in showcasing your monitoring program, contact Matt Doss, MiCorps staff, Great Lakes Commission, 734-971-9135, mdoss@glc.org.

MiCorps was created through an executive order by Governor Jennifer M. Granholm to assist the Department of Environmental Quality (DEQ) in collecting and sharing water quality data for use in water resources management and protection programs. For more information about the MiCorps conference or about MiCorps programs, please contact Matt Doss (see above) or visit www.micorps.net/conference.

By Dr. Dan Hayes and Dr. Bill Taylor

Stream Hydrology

This article was originally published in the October 2004 issue of "Michigan Trout" and re-printed with the authors' permission.

Because water temperature is so fundamental to the conservation of coldwater fishes, it is useful to talk about factors that contribute to coldwater stream habitat. One of the core ideas of stream hydrology (*the study of the movement of water in the ecosystem*) is that water generally enters streams by one of three paths. The first path is when rain or snow falls directly into a stream. Because most streams have a relatively small surface area, this path is often negligible. The second path water takes is by surface runoff. When enough rain falls or snow melts, the soil surface becomes saturated and is unable to soak up the excess. When this happens, water flows downhill across the soil surface into streams. The third path for water to enter a stream is by underground flow, or groundwater. When water is soaked up by the soil, gravity still pulls it downhill toward river valleys where it may seep into the stream or enter as a spring.

What is the importance of surface runoff and groundwater? The key difference for stream water temperature is that surface runoff tends to be close to the temperature of the soil surface, whereas groundwater approaches the temperature of the deeper soil layers. The temperature of the soil surface varies constantly, but in general shows a similar pattern to air temperature. Thus, surface runoff in late winter or early spring is often near the freezing point, but can reach 75° or more in summer. Groundwater, on the other hand shows little change across the seasons, and as a general rule, is about 2-4° warmer than the mean annual air temperature. In Iron Mountain, the mean annual air temperature is about 41, so groundwater in this region is about 43-45°. The mean annual air temperature in Benton Harbor is about 50°, leading to groundwater of about 52-54°. During the summer, groundwater inputs work to keep stream cool. In the winter, groundwater is warmer than the air temperature, thereby moderating stream temperature. This is why many of our best trout streams remain free of ice during much or all of the winter. The Au Sable and Manistee Rivers are great examples where flow is dominated by groundwater inputs, resulting in relatively stable temperatures year round. On the other hand, the Red Cedar River, which runs through the MSU campus, is dominated by surface flows and often reaches 80° during the summer, but freezes over solid during the winter. The differences in the amount of groundwater inputs between the Au Sable and the Red Cedar River are largely a function of soil depth and soil type, which are factors largely beyond our control. Thus, streams in different geologic settings differ naturally in their thermal characteristics and their potential to sustain coldwater fisheries. Even though geology plays a huge role in determining the temperature of streams, there are numerous human influences that can modify their potential. Once water enters a stream, there are several processes that affect temperature. An obvious factor is the amount of sunlight that reaches the stream. Removal of trees from the riparian zone affects streams in many ways, but a direct effect is that more sunlight reaches the water surface, resulting in more summertime warming. Thus, it is often recommended to leave a buffer strip of trees and vegetation along stream channels during forestry operations or when land is developed for homes or cottages. Removal of trees along a stream also changes local temperature, humidity, and wind speed, resulting in a change in what is called the microclimate. Such changes in the microclimate have a variety of effects on stream temperature making it difficult to generalize overall impact.

Forest clearing and other land development in the watershed also has an impact on stream temperature by altering the balance of groundwater and surface runoff. Forest clearing results in a number of changes to the water cycle, some of which increase groundwater flow and others that decrease groundwater. Harvesting of trees removes a major "consumer" of water on the landscape, thus tending to increase the total amount of water entering a stream (including groundwater). Trees soften the impact of falling rain and overland flow, and their removal tends to increase the amount of overland flow. Removing trees also lets more sunlight reach the soil surface, thereby heating the soil and increasing the typical temperature of runoff. Other developments, such as parking lots and roadways, have similar effects where the amount and temperature of runoff is increased. Groundwater abstraction (meaning pumping and removal of groundwater) can have an impact on stream flow and water temperature. The effect of groundwater removal depends on many factors including the rate of withdrawal, where the groundwater is removed relative to the stream, and the soils and geology of the watershed. Although there is a lot of controversy surrounding the use of groundwater and springwater for the bottled water industry, we need to remember that this is only one source of groundwater removal. Household wells and municipal water wells also tap into our groundwater reserves, potentially affecting stream hydrology.

Another human impact on stream temperature is through the effects of dams. As we've written before, there are a huge number of dams (more than 2,500) in the state of Michigan. For all except for the largest of these dams, the general effect is for them to warm water temperature by broadening the stream, thereby opening the stream to more sunlight. Dams also slow the passage of water, allowing more time for water to warm by sunlight and to have greater contact with warm air during the summer. Large dams sometimes result in an overall decrease in stream temperature. This occurs when the reservoir above the dam is deep enough for stratification to occur. Stratification is where thermal layers develop in lakes and reservoirs, resulting in cold water from the spring time being trapped at the lake's bottom. If a large dam draws water from this cold layer, it can cool stream temperatures substantially. Some of the nation's premier trout streams occur below large dams that result in consistent cool water temperatures year round. Few dams in Michigan are large enough to have such a substantial cooling effect on stream temperature, however. Given all of these factors and considerations that determine a stream's temperature, what can we do? Some factors, such as a watershed's soils are pretty much a "given," and there is little we can do to change this directly. In other cases, we can work to protect natural factors, such as riparian buffer strips, to help insure that streams receive as much shading as possible. Finally, some factors such as dams may require removal or very expensive mitigation to counter their effects on temperature. These are often choices that involve a broader segment of society than just anglers, and the costs and benefits to society as a whole need to be carefully considered rather than just focusing on the single issue of stream water temperature.

LOVE MY LAKE ... THIS MONTH: LAKE OF THE WOODS

"Love My Lake" is a new feature of The Michigan Riparian. In each issue, we invite subscribers and 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 follow the format you see below to answer the nine questions and submit them via e-mail to editor@churchill3c.com or via "snail mail" to: Love My Lake, c/o Jennifer Churchill, P.O. Box 44, Carson City, MI 48811.*** *Please also e-mail a large-format jpg or tiff photo of your lake, or snail mail a regular photo. Photos will not be returned, so please mail us a copy. We look forward to hearing from you!*
(fyi: The photo we've used at left is of beautiful Lake Independence in the Upper Peninsula.)

What is your name and MLSA affiliation?

1 My name is Charlotte Martin and I'm with the Lake of the Woods Improvement Assoc., Inc. My husband and I have been members since 1980 when the Association was first started. I was Secretary/Treasurer for a number of years, (through three presidents) and just resigned last July. I kind of miss it even though I'm still on the board and still get calls from people that evidently didn't read their newsletters too closely or maybe just from habit.

What is the name of your lake and where is it located (county and general region)?

2 Lake of the Woods in Hamilton and Decatur Townships in Van Buren County, town of Decatur. We're six miles west of Exit 56 on I-94.

3 **How long have you lived on lakes?** Since 1975. **How long have you lived on this particular lake?** Since 1986.

4 **How would you describe your lake? Very rural? Developed? A village or town?**
A village or town feeling.

What do you love most about living on a lake? What do you love most about this particular lake that you now live on?

5 Even in the winter there is always something happening on or around the lake. The snow stays cleaner and when you put feeders out when the weather breaks you have a vast range of birds that are always interesting to watch. In the late spring, the orioles and hummingbirds return as if they had a map right to your feeders. We've even had several deer in our front yard, and one year we had a whole herd. They're so graceful you can't help admiring them. Just the other day, there was a fox cub laying out, soaking up the sun at our summer-time neighbors' across the street. It didn't seem frightened and didn't run.


This is a photograph of Lake of the Woods, submitted by resident Charlotte Martin.

How is life on a lake different from a "non-riparian" lifestyle? Is the quality of life better? Do you feel more in touch with nature and seasonal cycles? What are the "pros" of living on a lake versus "land" living?

6 As noted earlier, you have a whole lake to look at (if you're retired), not cars going up and down the street in front of your house. When it pours, you know the lake would have to fill first before it would run over (thinking about the flooding in different parts of the U.S.). In the summer, if you're lucky, you have a boat or pontoon anchored at your pier; you don't have to hook up a trailer and fight the crowded roads to get to the lake. Unless there were reasons beyond my control, I would never move away from the lake.

What riparian-related advice would you give to someone thinking about moving to a lake, or who has just recently moved to a lake?

7 Usually living on a lake means septic tanks – this is a whole new ball game for someone used to sewers. Fertilizing in the yard adjacent to the lake is a no-no. I would advise them that a lake dweller needs a different way of living than someone in town. If your home is on the side of the lake opposite of town, you may need four-wheel drive, or at least a snow blower.

What types of activities do you and family members do on your lake? Kayaking? Fishing? Birding?

8 There are only two of us, both retired. Fishing, pontooning is our thing.

Do you find that family members visit more frequently when you live on a lake than when you don't? :) Do you have any funny anecdotes to share?

9 When we originally bought on a lake it was to get away from everything around home. We didn't invite people from home to just drop in anytime as we could visit with them at home, and invited those people that we really wanted to see.

The 2006 annual conference offered camaraderie, education and discovery

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Donald E. Winne, Executive Director

The Michigan Lake & Stream Associations, Inc.'s 45th annual conference took place at the Holiday Inn Conference Center in Big Rapids April 28-30. In the conference program, MLSA Executive Director Don Winne pointed out that the two peninsulas of Michigan include more than 3,000 miles of freshwater shoreline of four of the five Great Lakes and have 11,000 inland lakes of five acres or more. The annual conference is designed to provide information to help you manage your lake in the best possible way. Enjoy these few images from the 2006 conference, and see page 9 for information about 2007!

Top photo: Leo Schuster and his wife, Sylvia, and Pete Petoskey.

Second photo: Far right, Dick Pastula in a presentation.

Third photo: Marty Hilovsky with EnviroScience.

Fourth photo: Michigan Riparian editor Jennifer Churchill (center) with Tim Malatinsky and Jennifer Dwyer of the Michigan Nursery and Landscape Association.

FEATURE

What is nonpoint pollution?

Nonpoint pollution is the pollution of our nation's waters caused by rainfall or snowmelt moving over or through the ground. As the runoff moves, it picks up and carries away natural pollutants, as well as pollutants resulting from human activity, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters.

SOLUTIONS TO POLLUTION IS SITE-SPECIFIC

Technical factors that impact possible solutions include, but are not limited to, land use, climate, size of drainage area, soil permeability, slopes, depth to watertable, space requirements, type and condition of the water resources to be protected, depth to bedrock, and pollutants to be addressed.

WHAT ARE THE FIVE MAJOR SOURCES OF NONPOINT POLLUTION?

These are identified in the "EPA Guidance Manual for Nonpoint Sources" (1993, page 1-7):

1. Agricultural runoff.
2. Urban runoff.
3. Silvicultural (forestry) runoff.
4. Marinas and recreational boating.
5. Channelization and channel modification, dams, and streambank and shoreline erosion.

Even though these sources are identified for coastal waters, they apply for inland lakes and streams in Michigan.

The example described below is that of Lake Parker, a 206-acre lake located in Orleans County in northeastern Vermont. The restoration project for Lake Parker was requested, planned, funded, designed and installed in two years; it demonstrates the cooperation needed among federal, state, local entities and land owners to expedite such a project; and it quickly improved lake water quality.

VERMONT'S LAKE PARKER: MANAGING AGRICULTURAL WASTES

Lake Parker morphology (lake and watershed)

- Glacially formed water body at 44 degrees, 44 degrees N. latitude
- Nestled in steep, rolling hills of Orleans County
- Two perennial streams flow eastward into the lake
- Eleven dairy farms lie within the watershed
- Average annual precipitation is 42 inches
- Soils are poorly drained to moderately well-drained silt loams
- Average flushing time is about once every 6.4 months

Lake and watershed history

- Lake shoreline includes 110 seasonal or year-around cottages
- Lake has supported both cold-water and warm-water fish; cold-water fish include brown, lake and rainbow trout; warm-water fish include small-mouth bass, pickerel and yellow perch
- Excessive weed growth documented as early as 1966; weed growth worse in 1970s; weeds identified were Elodea, Chara, Potamegeton richardsoni and anplifolus (1985)
- Dissolved oxygen decreased to less than six parts per million in deeper portions of the lake

Agricultural nonpoint sources

A 1980 study by the Orleans County Natural Resources Conservation District found that soil erosion was not a significant nonpoint source. Instead it found that agricultural waste runoff from eight of the 11 farms was reaching water courses leading to the lake.

The watershed's agriculture was estimated to contribute 85% of the total phosphorous load to the lake. Studies by the Lake Parker Association and the Department of Water Resources found that lake contamination from human wastes and other cultural activities was not a problem.

Project development and installation

An application for assistance was submitted to the Soil Conservation Service in August 1980. The Soil Conservation Service developed a plan to improve agricultural waste management on eight farms.

The plan called for long-term contracts (three to 10 years) with the farmers. The farmers would install, operate, and maintain proper waste management practices in return for cost-share and technical assistance. By July 1982, all the practices were installed and operating on all eight farms.

Lake Parker now

Although a longer period of evaluation will be needed to establish trends of the lake's response to the waste management, so far indications have been promising. From the Lake Parker Association's viewpoint, the project has been highly successful.

Leo Millette, who heads the lake's weed harvesting program, maintains that "manure management has really helped - you can see the difference in the lake." In July of 1983 and 1984, for example, little weed cutting was needed in comparison with previous years. The lake's aquatic weed growth appears to be diminishing. Plankton activities may be less sensitive or respond more slowly to the declining concentrations of total phosphorous. The presence of nuisance bacteria needs further evaluation, but it is not perceived to be a problem.

Conclusion

The Lake Parker Measure is an example of what can be done through a program of voluntary participation. Government agencies at various levels and the local citizenry participated. All farmers with significant on-farm nonpoint sources participated. Lake users are already pleased with the results. Continued monitoring is needed to establish long-term water quality trends.

MCWC files suit in Michigan Supreme Court

– from the Michigan Citizens for Water Conservation newsletter, visit www.saveMIwater.org for more information

Michigan Citizens for Water Conservation filed an appeal to the Michigan Supreme Court in March 2006 in its case, *Michigan Citizens for Water Conservation v. Nestlé Waters North America, Inc.*, asking the court to put the rights of landowners who live on Michigan's lakes and streams, and the public who uses and enjoys them, back under the protection of established water law.

Last December, the Court of Appeals overturned the 2003 decision by the Mecosta County Circuit Court that shut down Nestle's high-capacity wells used to pump and divert water for shipment out of Michigan's watershed and the Great Lakes Basin. The Court of Appeals decision created a new "reasonable use balancing" rule that opens the door to Michigan's water to Nestle and other future exporters of water.

If the Court of Appeals decision is left standing, the many businesses that rely on the water, and the public who fish, boat and swim in Michigan's lakes and streams, are all going to be required to stand in line with those who want to sell our water for use somewhere else.

Established common law protects riparian landowners and public use and enjoyment of Michigan's magnificent waters. The Court of Appeals eliminated this protection. The Supreme Court will be asked to restore it. Michigan's long-term economy and quality of life depend on its lakes and streams and abundant aquatic life for its commercial endeavors and recreational enjoyment. The Court of Appeals' "reasonable use-balancing test" will allow Nestle, who has no riparian rights, to extract, divert, and sell water out of the Great Lakes Basin to be used elsewhere in the world.

The spring aquifer located on private property from which Nestle extracts the spring water forms the headwaters of the West Branch of the Little Muskegon River that feeds the Tri Lakes, Thompson Lake, and Osprey Lake plus the Dead Stream. For every gallon Nestle removes from the spring aquifer, nearly a gallon is removed from the stream and lakes. Nestle's pumping of water has reduced flows and levels and physically and substantially harmed Dead Stream and two lakes and interfered with the rights of riparian landowners and public who can no longer use and enjoy the stream for boating and fishing.

If the Supreme Court decides to hear the case, and returns the common law to limitations that protect private property and public rights, the pumping limits set now at 218 gallons per minute will have to be reduced or halted. Nestle has filed a cross-application, attacking the rights of citizens to even appeal.

After four days of facilitated mediation in late January, Michigan Citizens for Water Conservation and Nestle Waters North America, Inc., resolved the issues on remand from the Court of Appeals to the Circuit Court. Judge Dennis Kolenda, circuit court judge, issued the remand order and submitted it to the Court of Appeals. MCWC has achieved the interim goal of setting Nestle's pumping limits from the Sanctuary Springs that minimize impacts to the stream, wetlands, and lakes during the very low periods. In the summer months, the company will be restrained to as little as 125 gallons per minute because of seasonally low flows or levels. These benchmarks will minimize serious harm to the entire sub-watershed pending any appeals.

This is a significant achievement for MCWC and its many supporters. MCWC has won two court battles against Nestle that its pumping is an unreasonable use and will harm the riparian value of a stream and two small lakes and reduce Dead Stream's width. The stipulated order that restricts pumping is a positive step toward the enforcement of these victories. The settlement allows Nestle to pump, for now, an average of 218 gallons per minute, as opposed to the 400 gallons per minute originally permitted by the state. The order also allowed payment of MCWC's expert witness costs. If the Supreme Court decides to hear the case, the pumping limits will have to be reduced or halted.

Nestle wants everyone to think that bottled water isn't any different from the water in our beer or soda. The sale of water in a bottle or any size container is still a diversion or export of water, and not a product to which water is added. This is about legal precedents concerning water – not beer or baby food or soda pop; water law precedents that are needed to protect those of us who live and earn a livelihood in Michigan.

2006 ML&SA Regional Fall Seminar dates

Regions 14 & 15:
September 9
Covenant Point on Hagerman Lake

Regions 9, 10 & 11:
September 9
B&J's Restaurant in Gaylord

Regions 5 & 6:
September 16
White Lake Township Hall on Bogie Lake Rd and Rte. 59

Region 7:
September 30
Sage Township Hall, Pratt Lake in Gladwin

Region 2:
October 21
Jackson Community College in Jackson

Region 3:
October 25
Lawrence Senior Citizens Bldg. in Lawrence

NOTE: Contact Franz Mogdis at 989-831-5807 or fmogdis@maisd.com for information about Region 4 and Region 8 fall seminars. Those dates and locations were unavailable at press time.

Debunking myths

By Clifford H. Bloom, Esq.
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Anyone associated with inland lakes in Michigan (or the laws related thereto) is often confronted with long-perpetuated myths about such lakes. Many times, the perpetrators of such myths are insistent upon their truth, even when confronted with clear evidence to the contrary. In both this month's and next month's column, we will confront some of the most common myths.

1. Myth: **There is no such thing as a private lake in Michigan.**
This myth is probably grounded in the lack of a universal definition of a "private lake." Although certain Michigan statutes and court cases have defined what constitutes a private lake for a very limited purpose in a particular context, there is no overarching definition. If what is meant in a given situation is a lake with no public access site and which is entirely surrounded by private property, it would be a private lake and members of the public have no rights of access to the lake. However, even with that definition of a private lake, the water is still owned by the people of the state of Michigan. Accordingly, if someone were to drop from a helicopter to swim, was later picked up by the helicopter and never touches land, technically, that would be permissible, even on an otherwise private lake. In short, there are many inland lakes in Michigan which have no public access rights.

2. Myth: **Every inland lake in Michigan has a public access point.**
This is one that I hear several times a year from adamant proponents. Some myth perpetuators insist that every inland lake in the state of Michigan has a 66-foot-wide easement or road for public use somewhere on the lake, and that such public access was imposed when Michigan became a state. Other variations of the myth include assertions that every section line in Michigan constitutes a public road right-of-way so that if a section line intersects an otherwise private lake, the public can access the lake through that section line public easement. None of that is true. Some lakes do, of course, have public road ends, public parks, or other formal public access devices which were expressly created at some point in the past via a deed, plat, or other real-estate transfer device. But, many lakes have no such public access devices. It is probably the proliferation of public road ends at many lakes which is the basis for this myth.

3. Myth: **Members of the public can walk along the shoreline of any inland lake in Michigan without the permission of the adjoining riparian property owner.**
This myth has gained new momentum based upon the Michigan Supreme Court's decision last summer in the beachwalker case involving the Great Lakes shoreline. See *Glass v Goeckel, 473 Mich 667 (2005)*. Of course, that case applies only to Great Lakes shorelines and not to inland lakes. Some lakes do have public road rights-of-way, walkways, or similar public access devices which parallel the shoreline and allow limited public access to the lake. However, such public lake access devices do not exist on most inland lakes in Michigan.

4. Myth: **The ownership rights for Michigan inland lake lots end at the water and anyone can permanently moor a boat offshore without permission of the adjacent lakefront landowner.** Absent highly unusual circumstances, title to the overwhelming majority of lakefront properties on inland lakes in Michigan extends to the center of the lake. See *Hall v Wantz, 336 Mich 112 (1953)*. Typically, even though the deeds to such properties contain statements such as "to the water's edge," "ending at the water," "along the shoreline," etc., the courts have interpreted such language to mean that the adjacent bottomlands under the lake also belongs to the lakefront lot involved. Only the owner of the bottomlands (which is almost always the adjoining lakefront property owner) can utilize dockage, a swim raft, overnight boat mooring, etc., on his/her bottomlands. See *Hilt v Webber, 252 Mich 198 (1930); Bauman v Barendregt, 251 Mich 67 (1930)*.

5. Myth: **Riparian water rights are not like normal property rights and cannot be regulated by zoning or other local ordinances.**
This common misperception was obliterated by the Michigan Supreme Court in *Hess v West Bloomfield Twp, 439 Mich 550 (1992)*, and *Square Lake Hills Condo Ass'n v Bloomfield Twp, 437 Mich 310 (1991)*, although the Michigan appellate courts prior to the early 1990s never did subscribe to this myth (except for the ill-fated Michigan Court of Appeals decision in *Fox & Associates, Inc v Hayes Twp, 162 Mich App 647 (1987)*, which was overturned by *Hess*). Water and riparian rights are simply another type of real property right, which are subject to reasonable regulation by the state and local governments.

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Warning
The perpetrators of these myths will almost never believe you when you point out the falsity of their assertions, no matter how much proof you present. Unfortunately, the only way to dispossess many of these myth perpetrators of their false notions is pursuant to a final court decision of the specific case involved.

Read the November issue of The Michigan Riparian for more riparian myths debunked.

Pickerel-Crooked Lakes Association board of directors responds to Michigan DEQ decision

Editor's Note: The following is a letter addressed to John Arevalo of the Michigan Department of Environmental Quality (DEQ), signed by Pickerel-Crooked Lakes Association Board of Directors' members Ray McMullen and Wayne Blomberg.

Dear John:

In the matter of houses over water, Pickerel-Crooked Lakes Association believes there are a number of scientific, moral and common sense reasons to justify making a policy of denying applications that would permit people to build residences into the shoreline or over bodies of lakes and streams.

We were troubled at the ease with which permits were approved to allow living quarters over the water at the Windjammer project on Crooked Lake in Emmet County. The Association was led to believe that chances of approval for Phase I were very remote, so we let down our guard. The next thing we knew, the permits were granted. The long-term precedent-setting impact of this case is still being felt. Six more houses over water were approved on Crooked Lake because they are located adjacent to the first project.

The dominoes have begun to fall and this scenario, if played out, will result in lakes that have no shoreline or wetland margins remaining, and a solid ring of built environment in place of the natural environment implied in the name, Department of Environmental Quality. It's the quality of the natural environment you should be protecting. The bottom line is that natural shoreline is critical to the environmental quality of our lakes.

Natural shorelines provide leaf litter, woody debris, protection from erosion, shate, and littoral habitat (*Engel and Pederson, 1998*). Natural shoreline has a direct influence on the ecological integrity of a lake, and structures built into the shoreline and over the water have a severely negative impact on that integrity.

Most fish species spend at least part of their life cycle in the littoral zone of a lake. The elimination or reduction of the emergent and submergent plants and coarse woody debris of this zone are critical deterrents to fish populations (*Christensen et al, 1995*). Additionally, amphibians and reptiles utilize shorelines to bask, feed and over-winter (*Engel and Pederson, 1998*).

> It falls to the DEQ to set a firm policy that protects the natural resources on which our future depends.

Shoreline buffers are areas from the water's edge inland, typically 50 to 100 feet. When a natural shoreline buffer is maintained, the integrity of the shoreline is protected, habitat for wildlife and fish is maintained, and runoff and pollutant loads are decreased (*Engel and Pederson, 1998; Wenger, 1999; Fuller, 1995*). Residential sources of pollution include routine maintenance, cleaning agents, spraying for insects, etc.

The most recent National Water Quality Inventory reports that runoff from urbanized areas is the leading source of water quality impairments to surveyed lakes. Because of impervious surfaces like pavement and rooftops, a typical city block generates more than five time more runoff than a woodland area of the same size (www.epa.gov/nps).

Rather than encouraging the urbanization of lakes, it would seem that the best available and economically achievable means of reducing pollution is to keep rooftops and pavement far away from surface waters. Houses over water clearly represent the other extreme. The metal sheet piling used to create sea walls for lagoons, boathouses, and shoreline "stabilizing" structures have been shown to erode significantly, adding to sedimentation. They do not compare favorably to a natural shoreline for erosion control. Again, the best solution is to look at long-term impact and adopt a policy of leaving natural shoreline undisturbed.

Structures over water may include boathouses beneath. Dredging to accommodate boat dockage with its associated sediment and potential disturbance of pollutants (particularly in the case of old marinas) degrades the environment for both aquatic plants and animals as well as humans who come in contact with the contaminated water and sediment. Boathouses with residences above may create unusual fire hazards.

The U.S. Coast Guard keeps statistics on how many boat explosions and fires happen each year in the U.S. involving pleasure boats. Parking a boat under living quarters provides increased risk of explosion and fire with potential loss of life and certain loss of property, as well as water quality. Fire-fighting itself could be hampered by limited access: pumps and ladders may not be able to reach the house over water.

The shoreline and water will likely be subjected to impact of the equipment, materials used to extinguish the fire, and debris from the building and its contents. If the structure includes a boat

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house, the potential for fire is increased as a result of boat and fuel storage.

Among the unconsidered long-term impacts of allowing housing over water are the ramifications those permits have on other governmental agencies. In Emmet County, zoning regulations stipulate a minimum 60-foot setback from the water.

In the Windjammer Phase II case, both township and county planners expressed reservations about the zero-setback nature of allowing houses over water, but still voted for the project. Their rationale: since DEQ permitted the project, "It must be OK."

Debate also raged over whether a dredged lagoon is considered "part of the lake" and therefore subject to setback regulations. This seems to be an area that could use state-wide definition. PCLA believes if the lagoon derives its water from a public body, and if state boating and fishing rules apply, it then becomes part of the public body and should be subject to the same consideration as natural shoreline.

A structure built over water, unless it is carefully and purposefully disassembled will eventually end up in the water whether by natural disaster or the decay of aging.

We may not get hurricanes, but we do get tornadoes and high winds. Houses over water make it all the more likely that water will be the final resting place of disaster debris – not all of it wholesome, as New Orleans discovered.

Finally, we notice what appears to be disparity between commercial and private access to permits for dredging and construction on or around water. It seems that commercial entities are given great consideration for their projects, possibly for the cause of "jobs," "taxes," and "economic growth."

Of course, money is part of the answer: Developers can afford permits and experts to cast their project in a favorable light. The difficulty is that developers generally are interested in maximum profit, which they gain by maximum density.

> Natural shoreline has a direct influence on the ecological integrity of a lake, and structures built into the shoreline and over the water have a severely negative impact on that integrity.

Density is least appropriate in sensitive environments and should be discouraged, particularly where density can only be achieved by intruding on the resource: shoreline, lake, river, wetland.

Whether singly or en masse, however, houses over water are a blatant example of environmentally radical development and must be discouraged by all means available. The only consideration of the DEQ should be preservation of environmental quality; economic or political pressure is unacceptable as a reason to permit the kind of development that poses documented stress to lake ecology.

Too often, local zoning is weak or nonexistent in dealing with construction on sensitive sites. Local governments may be eager to increase tax revenue, regardless of environmental impact.

It falls to the DEQ to set a firm policy that protects the natural resources on which our future depends.

We appreciate the opportunity to put these initial thoughts forward for consideration by the Land and Water Management Division, and hope that we may meet with you at some point and engage in dialogue about the process and parameters of creating a policy regarding houses over water.

Sincerely,

Ray McMullen and Wayne Blomberg
Pickerel-Crooked Lakes Association

News From Lakes Around the State

Cedar River project

Three Lakes Association
Antrim County
Dick Garcia, President

The Cedar River is one of Antrim County's "Class A" trout streams and is a major tributary for the Intermediate River that flows into Lake Bellaire. The Michigan Department of Environmental Quality has informed us that a small portion of the toxic TCE plume from Mancelona has entered the Cedar near Schuss Mountain Road. Three Lakes Association, in collaboration with Bellaire Schools and the Friends of the Cedar River, will be monitoring the effects of the TCE on the macro-invertebrate population of this river. If you would like to help with this project, we need sampling net builders, friendly adult mentors, squiggly-bug identifiers, and general schleppers. Call the TLA office at 231-533-4852.

Weed treatment addressed

Bankson Lake Association
Van Buren County
Joan Merriman, President

We are committed to moving toward a sustainable, biologically sensible approach to weed treatment. But to paraphrase our members - "that ain't cheap." We also have the additional, serious threat of Cabomba to deal with and a rich diversity of native vegetation we hope to maintain. So we have an integrated approach that combines weevils with herbicides. Due to budget, we opted to try and establish weevils in what appears to be the area with the highest density of Eurasian watermilfoil. Our hope is to expand the weevil-treated areas as much as possible in years two and three. The cover area at the southwest end of the lake remains very heavily infested with Cabomba. This area is so completely filled and subject to significant boat traffic, that we felt it needed to be addressed. The applicator will attempt an experimental treatment combining two herbicides just in that area.

Master utility plan

Pentwater Lake Association
Oceana County
Ron Steiner, President

A utilities task force was established consisting of three representatives appointed by the Pentwater Township Board of Supervisors and three representatives appointed by the Pentwater Village Council. The charge of the task force was to study the community water and wastewater issues andn recommend to the legislative bodies an approach to deal with those issues. In addition, the task force has been investigating operational issues and the ever-critical cost factors. The task force established three goals: 1) study and recommend possible solution[s] to the water issue; 2) study and recommend possible solution[s] to the wastewater issue; and 3) study and recommend a means to operate the community water and wastewater systems.

What are CAFOs?

Magician Lake Improvement Association
Cass County
Kay Dukesherer, President

CAFO stands for "Concentrated Animal Feeding Operations," which are becoming larger and larger in our area. The ruunoff is to be contained in clay-lined holding ponds, but the concern about air and water pollution is a hot topic with the lake owners that share these watersheds. Land owners nearby say they create odors that make it impossible to enjoy being outside. Lake owners should drive by the CAFO north of Keeler and let your township officials know how you feel about having one near Sister Lakes.

"Air" we go ...

Twin Lakes Property Owners' Association
John Roose, President

Positive results are expected from the first full year of aeration on East Twin Lake. "Good weather conditions allowed us to operate the bubbler system for a full eight months," said Alan Kiriluk, an aeration committee member. "This is twice as long as the four months they operated in their inaugural year." In 2005, weather conditions permitted the aeration units to begin operations in April and conclude in November. The results from both testing and and anecdotal reports indicate aeration works to reduce sediment levels and improve water quality. Two factors are watched in the scientific testing: Dissolved Oxygen in the Water (DO) and Biological Oxygen Demand (BOD). "Maintaining appropriate oxygen levels allowed maximum biological activity to develop with active organisms eating and reducing the sediment found in the lake," said Nick Salvatore of Tri-County Aquatics, the Michigan-based company charged with coordinating and maintaining the aeration effort on the lake.

Going on a "Walkabout"

Crystal Lake & Watershed Association
Beulah, Michigan
Bob Appleford, President

The Crystal Lake "Walkabout" is an educational program to teach students, property owners and visitors about the Crystal Lake watershed. It focuses on hydrology - how water moves about the watershed. It also addresses current concerns about water quality, ecology, land use, zoning, septic tanks, green belts, sustainable development and watershed management. The "hands-on" approach to public education involves observational monitoring and environmental exploring. Participants "walk about" interpretive sites in the watershed - the lake and its tributaries, wetlands, dunes, and high rides, as environmental professionals describe features and conduct activities. Three events were held in 2005, one in spring, one in summer and one in fall. One is planned for August 2006, as well.

Cedar River project

Portage Base & Whitewood Owners Association (PBWOA)
Huron River Chain of Lakes
David Spielman, President

The PBWOA has always been active in protecting the rights of riparian owners from having their rights to the use of the water from being infringed upon by the development of an illegal marina. We have been active in keeping track of marina permits and the restrictions listed in the permit. We track the expiration dates on the marinas as well as the number of slips. This is not something new. In the past years, we have litigated many problems involving the illegal mooring of boats on road ends that are illegal. An

example of a situation that has occurred this past year is on Portage Avenue. There is about a five-foot-wide walkway between two cottages that leads to the water's edge. The dedication of this walkway is to the property owners located on Portage Boulevard for the egress and ingress to the water for swimming. There is no mention of boats being moored overnight in the deeds. For years there was a small dock, just one section with an end platform to assist in getting in and out of the water. Now, some of the backlot property owners' have turned it into a marina. They added about 150 feet of dock and are mooring 10 boats. All of this is illegal and should not be allowed.

Things to remember ...

GULL LAKE QUALITY ORGANIZATION
Hickory Corners, Michigan
Mike Gallagher, President

There's still summer fun ahead of us on the lake, and we need to remember some safety tips: 1) Life Jackets: For a vessel 16-feet or longer, at least one Type I, II or III personal flotation device for each person on board is required, as well as one Type IV. 2) Slow-No Wake: Must operate at slow-no wake speed if the vessel or person towed by the vessel is within 100 feet of a shoreline, any moored or anchored vessel, a dock or raft, any marked swimming area or persons in the water. A personal watercraft (PWC) must operate at this speed if crossing within 150 feet behind another vessel, unless the other vessel is a PWC. 3) A sailboat has the right of way over a powerboat. 4) When towing a person behind a vessel, there must be a driver and a spotter; if a boat, towing cannot take place from one hour after sunset until one hour before sunrise; and if a PWC, towing cannot take place from one hour BEFORE sunset until 8 a.m.

Be nice to the watefowl

BIG BROWER LAKE IMPROVEMENT ASSOC.
Rockford, Michigan
Gale Satterlee, President

Do not harass waterfowl by chasing them with any sort of watercraft, including remote-controlled toys. We love our waterfowl! Trumpeter swans, the world's largest waterfowl, were once very plentiful on the Michigan landscape. Trumpeter swans are a protected species, and are unique among Michigan waterfowl. They normally do not breed until their fourth year. They also form strong pair bonds that can last for years. Today, along with the trumpeter, two other species of swans can be found in Michigan. The trumpeter is easily identified as it is the largest swan in Michigan and has an all-black bill. The other resident swan is the mute swan, which is a European import. The mute has an orange bill and a bulbous knot at the top of its bill. The third species, the tundra swan, passes through Michigan during migration. The DNR is asking the public to help in the Census by reporting any trumpeter swan observations.

Lampreys of Indian Lake

INDIAN LAKE ASSOCIATION
Vicksburg, Michigan
Greg Nichols, President

Occasionally, an angler from Indian Lake will catch a fish infested with a lamprey. The initial reaction is one of alarm because many people remember the collapse of the Great Lakes fishery after the sea lamprey gained entry into the Great Lakes. Although we are not aware of any positive identification for the species of lamprey(s) found in Indian Lake, it is unlikely that it is the sea lamprey based upon size descriptions. The sea lamprey reaches an adult length of 18 inches, whereas the lampreys endemic to Michigan are 9-12 inches in length when mature. The dangers posed by the sea lamprey prompted a great deal of research, and one by-product of this work was the identification of four naturally occurring lamprey species in Michigan. The Michigan lampreys are the chestnut lamprey, the silver lamprey, the northern brook lamprey and the American brook lamprey. Only two of these species - the chestnut and the silver lampreys - are parasitic and feed on the blood of fish. The lampreys observed in Indian Lake are likely the chestnut lamprey since it is found in the streams that drain into Lake Michigan. While many people consider lampreys ugly and disgusting, they are not dangerous and do not attack humans. Lampreys are just another member of our local natural environment.

The future of weed treatment

GRAVEL LAKE ASSOCIATION
Lawton, Michigan
Craig DeSimone, President

As many of you can tell with your own eyes, Eurasian watermilfoil (EWM) treatment on Gravel Lake has been quite successful. Just three years ago, the boat lane on the lake was choked with weeds; boating and skiing were difficult at best. Now, our most recent aquatic plant survey shows that EWM has been nearly eradicated and that native plant species are starting to come back (which is good!). As the 2005 summer concluded, so did our treatment program for EWM on Gravel Lake. The special assessment district (SAD) we created four years ago expired in 2005.

Zebra mussels, gypsy moths

LAKE MARGRETHE PROPERTY OWNERS ASSOCIATION
Grayling, Michigan
Joe Porter, President

Zebra mussels continue to be a problem. Michigan's Clean Boats, Clean Waters volunteer AIS Education Program recommends the following: Before entering and/or leaving any lake, inspect and remove any visible mud, plants, fish or animals before transporting. Drain water from equipment (boat, motor, trailer and live wells) before transporting. Dispose of unwanted bait in the trash. Spray, rinse and dry boats and recreational equipment to remove or kill species that were not visible when leaving a body of water. ... Don Williams worked with state, county and township officials to determine the best way to fund and treat gypsy moths in our area. It was determined for 2006, we should just watch and document the gypsy moth population. Jane Winkler from the Michigan Department of Agriculture, along with Michigan State Extension Office, will conduct training classes on how to locate and count nests to determine when spraying is warranted.

News From Lakes Around the State

Purple loosestrife reminder

Byram Lake Association
Linden, Michigan
Jack Schoeppach, President

Purple loosestrife is a very hardy perennial which threatens wetlands by its aggressive growth. It produces a dense root system that out-competes other plants for nutrients and space. It can rapidly degrade wetlands. Byram Lake has purple loosestrife along parts of its shores. There are a couple of plants that look similar to purple loosestrife, but they are not categorized as an aquatic nuisance. Although purple loosestrife has an attractive bloom, it should not be voluntarily brought to the lake. If you have purple loosestrife, do not cut it down as that only makes it more aggressive. Contact a lake association board member for information on how to properly remove it.

First Sonar weed treatment

Lake of the Woods Improvement Assoc.
Decatur, Michigan
Roger A. Mattens, Sec/Treasurer

Professional Lake Management applied the initial Sonar herbicide treatment to help control weeds on Lake of the Woods (LOW) on April 25. Residents may have noticed the yellow postings surrounding the lake, announcing the type of treatment, date applied, DEQ permit number and applicable restrictions. This treatment restricted swimming until April 26 and irrigation with lake water until May 25. In simple terms, this meant not using lake water on lawns, flowers, seedbeds, vegetable gardens or areas to be planted until after May 25. All residents were encouraged to be mindful of subsequent PLM posted signs throughout the recreational season and heed restrictions and dates as they apply to future treatment products used. The 2006 treatment schedule was mailed to all LOW residents within the special assessment district and is available on the LOW web site at lakeofthewoodsmi.org.

Lake level and weeds

Barron Lake Association
Niles, Michigan
Emery Hirschler, President

With the lack of snowfall this past winter, our lake would be little more than a pond had our new augmentation well not started pumping 24/7 in December. As of April 17, we were at a level of 754.54 feet; still two feet below where we would like to be. Weed Patrol, Inc. will begin the three-year lake-wide eradication of Eurasian watermilfoil in spring 2007. The first assessment will be included on next winter's tax bill. The Howard Township Board of Trustees supported this lake improvement project. Since the whole lake will not be treated until next spring, Weed Patrol contacted each individual property owner, who had three-year contracts that are now expired, to determine whether they had wanted to continue treatment again.

Burt Lake history

Burt Lake, which is featured on this issue's cover of *The Michigan Riparian*, has always been an important link in the inland waterway stretching from Petoskey on Lake Michigan to Cheboygan on Lake Huron.

The route was originally used by aboriginal people who called it "Cheboiganing" (an Algonquin word meaning portage or "passing through") and later by the French traders to traverse the two Great Lakes so as to avoid inclement weather and the treacherous currents in the Straits of Mackinac.

In 1839-40, the United States government commissioned William A. Burt to survey the area with a goal to carry the north-south range line or meridian from the Lower to the Upper Peninsula.

The impetus for this program was the discovery of copper and iron deposits in Michigan's western sections of the Upper Peninsula.

In 1876, the Indian River was dredged to allow passage of boats and logs. In 1877, the Sturgeon River was diverted so the main flow entered Burt Lake near the state park, while the remaining small flow of the now Little Sturgeon River remained on the old route of the river and still enters the Indian River just east of downtown.

The area originally flourished with the lumber industry and, more recently, as a tourist and retirement destination. As early as the late 1890s, people arrived by train in Petoskey or Topinabee, then traveled to their summer cottage by steamboat through the inland waterway.

Today, jet skis and float boats have replaced the canoes and steamboats, and I-75 is usually faster than the railroad.

But the area's allure remains timeless and the inland waterway one of its main attractions. The Burt Lake watershed is just a little bit larger than the lake itself. In Michigan, watersheds are usually two or more times larger than their lakes.

Preserving and protecting this unique environment is the mission of The Burt Lake Preservation Association. Its 700-plus members proactively monitor and respond to issues that could affect the lake and its continued enjoyment by future generations.

Cover photo (above) of Burt Lake is courtesy of Burt Lake property owner and photographer Albert Sickinger.

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www.mi-riparian.org

Man barred from lake

According to an article written by reporter Cheryl Holladay in the November 10, 2005, "Houghton Lake Resorter," a 30-year Higgins Lake property owner, Robert Pardue, was banned from using the lake for one year by Judge Terrance R. Thomas, who sent a strong message to violators of his April 19, 2005, order prohibiting defendants in several subdivisions with roads ending at the lake from mooring boats and other activities.

"You are not to be found on that lake," the judge ordered, prohibiting Pardue from even fishing on the lake for the remainder of 2005 and all of 2006. Pardue was one of seven defendants in the Higgins Lake Property Owners Association lawsuit who appeared for a show cause hearing.

Thomas, a Washtenaw County judge assigned to some Higgins Lake road end cases, said the court would enforce rules prohibiting road-end users from picnicking, lounging, sunbathing and installing boat hoists, based on previous Michigan Court of Appeals rulings. Thomas said he wanted to make the punishment harsh enough so that he would not have to "chase somebody off these road ends."

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