

FEBRUARY 2004

Volume 39 No. 1

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



**Boyne Mountain Resort**  
Boyne Falls, Michigan

"THE MICHIGAN RIPARIAN (ISSN 0279-2524) is published quarterly for \$2.00 per issue by the Michigan Riparian Inc., P.O. Box 249, Three Rivers, Michigan 49093. Periodicals postage paid at Three Rivers, Michigan and additional mailing offices."

POSTMASTER:  
Send address changes to:  
The Michigan Riparian  
P.O. Box 249  
Three Rivers, MI 49093

The Michigan RIPARIAN is the only magazine devoted exclusively to protection, preservation and improvement of Michigan waters and to the rights of riparian owners to enjoy their waterfront property.

The Michigan RIPARIAN is published quarterly and is mailed to subscribers during February, May, August and November.

**THE MICHIGAN RIPARIAN** magazine is owned and published by the Michigan Riparian Inc., a Michigan non-profit corporation.

**EDITORIAL and BUSINESS OFFICE:** 124½ N. Main Street, P.O. Box 249, Three Rivers, MI 49093.

**TELEPHONE:** 269-273-8200

**FAX:** 269-273-2919

**ADVERTISING DEADLINE:** No later than 1st of the month preceding month of publication.

**ADVERTISING RATES:** Sent upon request.

**SUBSCRIPTION RATES:**

Individual Subscription ..... \$8.00  
Group Rates: 10 to 49 Subscriptions ..... \$7.00  
50 or more, or all members of a Lake Association ..... \$6.00

**EDITOR and PUBLISHER:** Donald E. Winne

Printed by J.B. Printing, Kalamazoo, MI 49007.

**OFFICERS AND DIRECTORS  
OF THE MICHIGAN RIPARIAN, INC.**

David Maturen, *President*  
Merrill Petoskey, *Vice President*  
Donald E. Winne, *Chief Executive Officer*  
Dr. Robert King, *Director*  
William Hokanson, *Director*

**THE MICHIGAN RIPARIAN  
A SHORT HISTORY**

The first "Michigan Riparian" was published by the Association of Michigan Lakes and Streams Association in the winter 1965-1966.

The purpose of the Riparian was to inform riparian owners of trends in the management of lakes and streams, and of legislation either existing or proposed that affects the rights of waterfront owners.

On April 8, 1972, the Directors of Michigan Lake & Stream Associations established The Michigan Riparian as a separate corporation in order to qualify the State Association for tax deductible donations.

The Winter, 1972 issue of *The Michigan Riparian* includes the following statement, "The Michigan Riparian is the official publication of Michigan Lake and Stream Associations, Inc."

*The Michigan Riparian, Inc.* is not responsible for views expressed by our advertisers or writers in this magazine. While The Michigan Riparian, Inc. has not intentionally printed incorrect material or omissions, the contents are nevertheless the responsibility of the parties furnishing material for this magazine. Accuracy of information is subject to information known to us at printing deadline. We apologize for any errors.

Copyright ©2003 by *The Michigan Riparian, Inc.*

No maps, illustrations or other portions of this magazine may be reproduced in any form without written permission from the publisher.

**In This Issue**

**Cover:** Boyne Mountain Resort, Boyne Falls, MI

- 8 YELLOW PERCH: MAINSTAY OF LAKE MICHIGAN FISHERIES
- 11 THE ATTORNEY WRITES—Clifford Bloom
- 13-15 MLSA 43RD ANNUAL CONFERENCE
- 16 AQUATIC NUISANCE CONTROL: NEW RULES & RECENT CHANGES
- 18 WATER, WATER EVERYWHERE?
- 20 FISH FACTS, MERCURY IN THE ENVIRONMENT

*The Michigan Riparian* magazine adds Contributing Editors to its staff. The new editors and their areas of expertise are listed below:

Dr. Lois Wolfson, Institute of Water Research, Michigan State University. Area of expertise—Aquatic Plants.

Anthony Groves, Progressive AE of Grand Rapids. Tony's area of expertise is Land Use and Water Quality.

Dr. Don Garling, Department of Fisheries and Wildlife, Michigan State University. Area of expertise is Fisheries Management.

Bob Weir, Writer and Communications Consultant, Port Huron, Michigan. Areas of expertise include land use, water resources, and stewardship of those resources.

**THE MICHIGAN RIPARIAN SUBSCRIPTION COUPON**

(Mail to: The Michigan Riparian, P.O. Box 249, Three Rivers, Michigan 49093.)  
Office address: 124 ½ N. Main St.

**Please enter my subscription to *The Michigan Riparian* magazine.  
One year rate: \$8.00**

First Name \_\_\_\_\_ Initial \_\_\_\_\_ Last Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

# YELLOW PERCH: ONCE NOT PROFITABLE ENOUGH FOR COMMERCIAL CATCH, NOW MAINSTAY OF LAKE MICHIGAN FISHERIES

by Nancy Riggs, Illinois-Indiana Sea Grant,  
*The HELM*, Fall/Winter 1996

*“Nowhere can one see more clearly illustrated what may be called the sensibility of such an organic complex — expressed by the fact that whatever affects any species belonging to it, must speedily have its influence of some sort upon the whole assemblage.”* S. A. Forbes, from “The Lake As A Microcosm,” The Scientific Association, 1887, ILLINOIS NATURAL HISTORY SURVEY

When Lawrence Schweig’s grandfather started commercial fishing operations in southern Lake Michigan in 1922, yellow perch were plentiful. The southern Lake Michigan fishery, or fishing ground, would yield more than a century of abundant harvests. These tasty fish, however, weren’t sought by commercial fishermen in the 1920s. “Yellow perch weren’t very important then because there were so many of them. They were cheap and were popular for Friday night fish fries,” Schweig said.

Today, though, yellow perch represent a significant portion of the business at Joe’s Fisheries, operated by Schweig and son Larry in Chicago, that includes commercial fishing, a processing plant and a restaurant. Commercial fishermen in southern Lake Michigan depend on yellow perch and chubs, where the approximately 11 million people along the lake’s southern shorelines are a major consumer market. Yellow perch are also important to sports fishermen.

Although the reasons aren’t clear, worldwide fish populations have declined since a peak commercial catch of 86.1 metric tons in 1989, nearly five times the catch of 1950. In 1994, declines off the Massachusetts coast led to a fishery closing, shutting down an annual \$200 million industry. This trend has occurred in the Great Lakes, too. Following a steady decline in yellow perch in Lake Michigan, lake management organizations in the four Lake Michigan states have issued stringent fishing limitations. Both commercial and sports fishermen are displeased because their livelihoods are threatened with fisheries closures and catch limits.

Schweig, who also is president of the Illinois Seafood Consumers Council, an organization of commercial fishermen, expressed concern about maintaining a yellow perch market. “We have businesses to operate, and building a market is difficult. If the fish that consumers develop a taste for isn’t available, they will switch to another product, and regaining that market is very difficult. We feel very strongly that consumers have first claim on yellow perch. We want it to be available at the lowest cost.”

Indiana commercial fishermen face additional challenges if they are not able to catch yellow perch, noted Jim Francis, Lake Michigan biologist with the Indiana Department of Natural Resources. “Indiana lies at the southern tip of Lake Michigan where the waters are more shallow. Chubs, the only other species available as commercial catch, are a deep-water fish, and are very limited here,” Francis said.

The sportfishing industry, too, faces economic hardships attributed to the yellow perch decline. John Vadas, president of Illinois-Indiana Perch America, a sportfishing organization, started Vets Bait and Tackle Shop, in Chicago in 1951 upon his return from



military service. “We’re a stone’s throw from Lake Michigan,” Vadas said. “Since 1985, business has been steadily downhill, and the past couple of years it’s really dropped off. We had about 25 bait and tackle shops in Chicago, and now we’re down to five or six. The years between 1975 and 1985 were peak years, not only for yellow perch but also for salmon. My business now is about 50 percent of that.”

## Early Commercial Fishing

“In earlier years, the productivity of commercial fisheries in Illinois waters of the lake was significant, with more than one million pounds caught annually,” said Rich Hess, Lake Michigan fisheries biologist with the Illinois Department of Natural Resources. “The commercial fishery has changed considerably over time because Lake Michigan has been in a state of flux for the last 100 years or so.”

Tremendous population growth and subsequent increased fishing in the southern Lake Michigan region, coupled with the invasion of nonindigenous species, or exotics, had a major influence upon the fishery. Early fishermen harvested Lake Michigan fish to meet the needs of the burgeoning population. Coming from the East, this population brought their European taste for fish to the Great Lakes region, creating a market for a southern Lake Michigan’s commercial fishing industry. Chicago’s population increased from approximately 50 in 1830 to 1.7 million people by 1900. Fishing practices of early commercial fishermen weren’t so different from the fishing practices of Native Americans of the southern Lake Michigan region, who fished to provide sustenance, primarily in the shallow bays and tributaries along the shoreline.

## Pollution and Technology Influences on Fishery

Pollution and technology are usually associated with recent decades, but both played important roles in southern Lake Michigan’s commercial fishing operations. As early as the mid-1800s, shoreline commercialization was beginning to create pollution in shallow waters where seine fishing was rapidly growing, and some species of fish were already becoming scarce or nonexistent. The growing markets of an increasing population center in the lower lake region encouraged increased commercial fishing efforts. The mid-1800s saw development of the gill net, with its tiny threads not easily seen by fish, allowing fishing on or near the lake bottom to obtain larger catches than with seine fishing. The steam-powered gill-net lifter followed closely on the heels of the gill net, allowing fishermen to bring in many more nets daily than in the past.

## Fish Conservation Legislation

During most of the 1800s, commercial fishing was virtually unregulated in the Great Lakes with only token attempts to control



annual catches. In 1872, the first Illinois fish conservation law limited net size but included no harvest limits. When Indiana began regulating commercial fishing in the early 1980s, commercial fishing licenses fees were \$20 to \$50, depending on boat size. Lake Michigan fishing is regulated by state departments of natural resources in both Illinois and Indiana.

Commercial catch in Illinois waters during the 1930s averaged about 1.3 million pounds annually and was primarily chubs, perch, lake trout and lake herring. Commercial catches of yellow perch in the 30-year span between 1934 and 1964 fluctuated, ranging between 100,000 and 600,000 pounds, according to Illinois DNR.

“Commercial harvest is not necessarily a reflection of availability,” Hess pointed out. “A number of other factors contribute to catch with market choices being a primary factor. Prior to the 1950s, the commercial fishery was multispecies. Commercial fishing responded to market price and demand.”

### **Increased Pressures on the Fishery**

Expanded harvests to meet demand during World War II reduced the lake trout. Nonindigenous species including sea lamprey, alewife and smelt would soon affect the fishery. Sea lampreys initially attacked lake trout, then moved onto other species including yellow perch. Continuing technology provided the diesel-powered gill net tug, and more efficient nylon twine replaced cotton mesh, allowing increasingly larger commercial harvests. Lake trout were reproducing in smaller numbers, and within two decades, lake trout and herring disappeared from Lake Michigan. Multispecies fishing was only a memory, and chubs and yellow perch became southern Lake Michigan fishery mainstays.

Beginning in the 1960s, salmon and trout stocking efforts encouraged a strong sportfishing industry in southern Lake Michigan. By the early 1980s, sport fishermen spent more than 3.5 million fishing days on Illinois waters of Lake Michigan, and about 85 percent of the number of fish caught are yellow perch. Between 1980 and 1985, Indiana sport fishing total catch of all species averaged 193,000 fish.

### **Regional Response to Lakewide Problem**

Yellow perch supports sport fisheries in all four states; commercial fisheries in Wisconsin, Illinois and Indiana; and a tribal fishery in Michigan. In response to studies indicating that yellow perch have declined significantly since 1989, the Yellow Perch Task Group was formed in 1994 by the Lake Michigan Committee of the Great Lakes Fishery Commission, with representation from the four Lake Michigan states and the tribal fishery. A 1994 public meeting brought about three recommendations: 1) implement more restrictive harvest regulations; 2) conduct research to address causes of the yellow perch decline; and 3) increase enforcement of harvest regulations. Recently, the task force has prioritized research needs and will soon make recommendations to management agencies.

Management agencies have responded to declining fisheries with varying degrees of regulation. In 1975, in response to a decline in bloater chubs, Illinois set new standards for commercial fishing licensees, reducing the number of licensees from 44 to 3. That number was increased to five in 1995.

In the early 1980s, Indiana commercial fishing licenses were classified into Class 1, 2, and 3, with fees of \$1,000, \$2,000 and \$3,000, and the state currently has 13 commercial licensees. Gill net fishing was banned in 1988, and trap net limits were established. Francis noted, “Salmon and trout were getting caught in the

gill nets and dying. Yellow perch are bottom dwelling and will swim into the trap nets while salmon and trout won't.”

Illinois commercial harvest of yellow perch for 1995 and 1996 was limited to 24,000 per licensee, 35 percent of the 1994 quota of 68,000 per licensee. The 1995 Indiana limit of 360,000 pounds, 35 percent of the 1994 catch of one million pounds, was divided among the three licensee classes. Further reductions in the 1996 catch allowed only 160,000 pounds. According to Francis, Indiana DNR weigh-in checkpoints indicated that commercial fishermen were complying with limits. Wisconsin and Michigan also set 1995 limits at 35 percent of the 1994 catch. Illinois, Indiana and Wisconsin set sport fishing daily bag limits at 25-fish per person, and Michigan reduced its sport fish limit of 100 to 50 per day. Lake Michigan fisheries were closed in the month June. In October 1996, Wisconsin banned commercial yellow perch fishing and set a sport fish limit of five per day.

### **Challenges at Hand**

Illinois DNR data indicates that mature perch six to eight years of age made up 86 to 89 percent of the catch at two annual assessment locations. These statistics indicate a dramatic decrease in the number of young perch, and consequently a drastic decline in perch population. Zebra mussels may be at least partly responsible for this decrease because they siphon the water, removing plankton, microscopic plants and animals. Young perch feed on plankton in open waters before moving to the lake bottom for their food as they grow.

New concerns are surfacing with the arrival of other nonindigenous species. Ruffe are expected to arrive in Lake Michigan soon and likely will be major competitors with perch for food. Gobies are now in Lake Michigan, but their potential impacts are not clear, according to Sea Grant researcher Ellen Marsden.

Illinois-Indiana Sea Grant currently is funding research addressing the potential effects of ruffe and zebra mussels on the Lake Michigan ecosystem. Phillip Pope, Illinois-Indiana Sea Grant director, said, “Yellow perch are important to the southern Lake Michigan ecosystem. A wide range of efforts are underway to determine the reasons for the perch decline. Once an understanding is reached, the aim is to reverse the population decline. Time is short, however, if we are to save the present commercial perch fishery.”

Some commercial fishermen believe that management agency studies do not accurately reflect the yellow perch in Lake Michigan, and some question assessment methods. Schweig said, “There are similar concerns about yellow perch depletion in both Lake Michigan and Lake Erie. We don't understand how on Lake Erie, Canadian agencies increase yellow perch quotas while in the United States, regulatory agencies in states bordering Lake Erie decrease quotas. Fish do not recognize international borders.”

Conversely, some sport fishermen believe further limitations and more effective enforcement of commercial fishing regulations are needed. Vadas noted, “Some of these commercial fishermen are out here long after they're supposed to be and are taking salmon and trout as well.”

Management agencies, commercial fishermen, sport fishermen, and consumers all are stakeholders in this significant issue. Continued cooperation and a thorough investigation of all options to salvaging yellow perch — perhaps the last Lake Michigan species that can support a southern Lake Michigan commercial fishery — are essential.

# TOWNSHIPS REGULATE DOCKS, BOATS AND SPEED ON INLAND LAKES IN MICHIGAN

## THE PROCEDURE FOR ADOPTING WATERCRAFT REGULATIONS IS AS FOLLOWS:

(Section 16): “Local political subdivision which believe that special local ordinances of the type authorized by this act are needed on waters subject to their jurisdiction shall inform the department (Of Natural Resources) and request assistance. All such requests shall be in the form of an official resolution approved by a majority of the governing body of the concerned political subdivision. Upon receipt of such resolutions the department shall proceed as required by Sections 14 and 15.”

(Section 14): The department may initiate investigations and inquiries into the need for special rules for the use of vessels, water skis, water sleds, aquaplanes, surfboards, or other similar contrivances on any of the waters of this state. If controls for such activities are considered necessary, or changes or amendments to or repeal of an existing local ordinance is required, a local ordinance shall be prepared. Notice of a public hearing shall be made in a newspaper of general circulation in the area in which the local ordinance is to be imposed, amended, or repealed, not less than 10 calendar days before the hearing. Interested persons shall be afforded an opportunity to present their views on the proposed local ordinance either orally or in writing.

(Section 15): A local ordinance proposed pursuant to section 14 shall be submitted to the governing body of the political subdivision in which the controlled waters lie. Within 60 calendar days the governing body shall inform the department that it approves or disapproves of the proposed local ordinance. If the required information is not received within the time specified, the department shall consider the proposed local ordinance disapproved by the governing body. If the governing body disapproves the proposed local ordinance, or if the 60 day period has elapsed without a reply having been received from the governing body, no further action shall be taken. If the governing body approves the proposed local ordinance, the local ordinance shall be enacted identical in all respects to the local ordinance proposed by the department.

(Section 17): (1) State, county, and local peace officers shall enforce local ordinances enacted in accordance with this act. Some examples of special local watercraft ordinances adopted by townships under this Act follow:

Algoma Township, Kent County: “On the waters of Camp Lake, Sections 7 and 18, T9N, R11W, Algoma Township, Kent County, it is unlawful at any time to operate a vessel in excess of 40 miles per hour (64 kilometers per hour). *Effective August 27, 1986*

Sidney Township, Montcalm County: “On the waters of Derby Lake, Section 10, T10N, R7W, Sidney Township, Montcalm County, it is unlawful between the hours of 6:30 PM and 10:00 AM of the following day, to: a) operate a vessel at high speed, or b) have in tow or otherwise assist in the propulsion of a person on water skis, water sled, surfboard or other similar contrivance.” *Effective July 5, 1986*

Frost Township, Clare County: “On the waters of Halfmoon Lake, Section 22 and 23, T20N, R4W, Frost Township, Clare County, it is unlawful to: a) operate a vessel at high speed or b) have it tow, or otherwise assist in the propulsion of a person on water skis, a water sled, surfboard, or other similar contrivance.” *Effective July 15, 1986*

### NUMBER OF BOATS PERMITTED BY SHORELINE PARCEL

TOWNSHIP	COUNTY	BOATS PER FEET
Bloomfield	Oakland	1/100
Cannon	Kent	1/70
Chester	Ottawa	3/100
Elba	Lapeer	4/100
Ganges	Allegan	1/50
Hayes	Charlevoix	1/100
Putnam	Livingston	1/30

### NUMBER OF DOCKS PER PARCEL & MAXIMUM LENGTH

TOWNSHIP	COUNTY	No. DOCKS & LENGTH
Brady	Kalamazoo	1/50
Chester	Ottawa	1/50
Cannon	Kent	1/70
Grattan	Kent	1/80
Green	Gr. Traverse	1/150
Hayes	Charlevoix	1/100

### MINIMUM SHORELINE WIDTH & DEPTH PER PARCEL

TOWNSHIP	COUNTY	WIDTH	DEPTH (ft)
Ganges	Allegan	50	—
Fabius	St. Joseph	70	200
Cannon	Kent	70	—
Spencer	Kent	70	—
Blue Lake	Kalkaska	100	200
Hayes	Charlevoix	100	—
Genoa	Livingston	125	400
Schoolcraft	Kalamazoo	150	533

### MINIMUM SHORELINE FOR FUNNELING AND DWELLING

TOWNSHIP	COUNTY	PER PARCEL	PER DWELLING
Albert	Montmorency	100	20
Argentine	Livingston	150	20
Cannon	Kent	70	70
Green Lake	Grand Traverse	100	100
Porter	Van Buren	200	50

Some townships prohibit funneling — Fenton, Genessee, Grattan, Kent, Resort, Emmet.

### DWELLING AND SEPTIC SETBACKS

TOWNSHIP	COUNTY	DWELLING	SEPTIC
Blue Lake	Kalkaska	30	75
Elba	Lapeer	80	80
Fabius	St. Joseph	45	45
Genoa	Livingston	125	125
Schoolcraft	Kalamazoo	50	50

### MAXIMUM SPEED OF MOTORIZED WATERCRAFT

A number of lakes in the State have adopted slow/no-wake speeds around the clock. Others have adopted a slow no-wake speed from 7:30 p.m. until 11:00 o'clock the following day, and 45 mph from 11:00 a.m. to 7:30 p.m. Some lakes have a maximum speed of 40 mph.



# Attorney Writes

By Clifford H. Bloom

Law, Weathers & Richardson, P.C.

Bridgewater Place, 333 Bridge Street, N.W., Suite 800, Grand Rapids, Michigan 49504-5360

## WITHER ICE MOUNTAIN?

A few months ago, Mecosta County Circuit Court Judge Lawrence Root issued his landmark decision in the case involving various riparian property owners versus Perrier/ Nestlé, the bottlers of Ice Mountain spring water. The decision is currently on appeal. Some riparians throughout Michigan have shown little interest in this case since they assume it is simply a well-water case. Riparians should be aware that the decision of the Michigan appellate courts in this case could have a profound impact upon riparian property rights in a variety of different contexts in the future.

Interestingly, despite popular misconceptions, this is not a standard well-water case. Rather, the bottler intercepted water from an unconfined aquifer before the water could reach the surface. The groundwater involved supplied a creek, some wetlands, and several lakes. The company admitted that at times, its pumping from the ground would show a measurable water level drop in the creek and at least one lake. The amount of water level droppage, causation and whether any harm occurred due to the pumping was in dispute at the trial. Therefore, it can be argued that this case is more analogous to where someone pumps large quantities of water from a lake or stream (for example, a golf course or ski resort snow making operation) as opposed to deep well-water users (such as a municipal water system, individual home wells or agricultural irrigation from wells).

This case has two general overarching issues. First, there is the issue of water being removed or diverted from the watershed involved. Second, the case also examines competing riparian interests. This article addresses only the second issue.

Given the length of Judge Root's written opinion (67 pages), I will concentrate only on the portion of the opinion which will likely have a direct impact upon the riparian reasonable use doctrine in the future. I will also not address the portions of the court opinion dealing with the Michigan Environmental Protection Act, the Wetlands Protection Act, the Inland Lakes and Stream Act, or other statutory issues. Judge Root pointed out that there is no appellate case law in Michigan directly on point regarding the common law riparian issues in this case. Accordingly, he had to analogize to and extrapolate from existing appellate decisions.

As Judge Root noted, the existing case law normally deals with two competing parties in more or less equal positions—for example, two different well-water users or two different surface riparians. Judge Root held as a preliminary matter that the rights of riparians as to existing natural lakes and streams on the earth's surface is generally superior to the rights of property owners (or their lessees or easement holders) to pump or intercept water out of the ground which would directly impact the surface bodies of water. The Judge then went on to hold that the "reasonable use" doctrine also generally applies to such disputes. Four appellate court cases were cited. First, the case of *John B Dumont v John G Kellogg*, 29 Mich 420 (1874), involved a dispute between two commercial riparians to a stream regarding one property owner's interference with the flow of the stream to the detriment of the other property

owner. Both parties were of roughly equal standing. The Michigan Supreme Court held that the reasonable use doctrine applied. The next common law case cited by Judge Root was *Schenk v City of Ann Arbor*, 196 Mich 76 (1916). That case involved two competing well-water claims. The Supreme Court held that one property owner cannot utilize a well in such ways that it would materially diminish the flow to a well of an adjoining property owner. The next case is *Hoover v Crane*, 362 Mich 36 (1960), which was a dispute between riparian property owners wherein one of the riparians was utilizing water from the lake for irrigation purposes for his fruit orchard. The last of the common law riparian rights cases mentioned was *Maerz v US Steel Corp*, 116 Mich App 710 (1982). In that case, the Michigan Court of Appeals dealt with a situation where a quarry operator was making use of groundwater in a way that adversely affected area water wells.

Ultimately, Judge Root held that where a groundwater user negatively impacts riparian bodies of water on the surface, the following is applicable:

Distilling (I long ago gave up trying to avoid aquatic analogies and metaphors) all of this discussion to a rational, and enforceable, rule of law, I have reached the following conclusion. In cases where there is a groundwater use that is from a water source underground that is shown to have a hydrological connection to a surface water body to which riparian rights attach, the groundwater use is of inferior legal standing than the riparian rights. In such cases, as here, if the groundwater use is off-tract and/or out of the relevant watershed, that use cannot reduce the natural flow to the riparian body. This is not a pure *per se* rule in that it does require a showing that the flow to/in the surface water body has been affected to a degree that there is a level of confidence that the effect(s) are not part of the natural forces at work on the surface water(s). I accept Plaintiffs' counsel's suggestion that, in this case, a showing of effects in the range of three to five percent would be sufficient to exclude the natural 'background' in the system such that effects in excess of that range satisfies the requisite showing. The next step in the rule is in cases where, again as here, the groundwater use is shown to have measurable and proven negative impacts on the riparian body/bodies, with the analysis not having any component regarding whether the use is off-tract/out of watershed. The reader will note that the phrase 'material diminishment' has not been used. I have perceived that the phrase 'material diminishment' has been a source of confusion in that there has never been a good definition, or even analysis, of what is or is not 'material.' For those intent on using the phrase I suggest that it be used in the second scenario above, using the phrase 'measurable diminishment' for the first. Both are harms for which a remedy will lie. This is not inconsistent with my rulings before trial in that I reserved ruling on the question of whether what then was being referred to as material diminishment, but really a request that I find as a matter of law that a certain measurable level of loss of low and/or stage, was enough to warrant relief to the Plaintiffs.

Page 48 of Judge Root's decision.

As this case proceeds through the appellate courts, the Riparian will keep its readers apprised of developments.





#### OFFICERS

**Dennis Zimmerman, President**  
716 E. Forest, P.O. Box 325  
Lake George, MI 48633-0325  
Ph 989-588-9343 Fax (same number)

**Pat Wolters, Secretary**  
2442 Crockery Lake Shores Rd.  
Casnovia, MI 49318  
Ph 616-887-8707 Email patwolters@aol.com

**Pearl Bonnell, Treasurer & Dir. of Operations**  
P.O. Box 303, Long Lake, MI 48743  
Ph 989-257-3583 Fax 989-257-2073  
Email pbonnell@mlswa.org

#### REGIONAL VICE PRESIDENTS

##### Floyd Phillips, Region 1

9535 Crestline Dr.  
Lakeland, MI 48143-0385  
Ph 810-231-2368

##### Kathy Miller, Region 2

6090 Dexter Lane  
Manitou Beach, MI 49253  
Ph 517-547-6426 Email kam@cass.net

##### Sue Vomish, Region 3

52513 Twin Lakeshore Dr.  
Dowagiac, MI 49047  
Ph 269-782-3319 Email Neese@epowerc.net

##### Franz Mogdis, Region 4

5525 Vettrans Ave, Stanton, MI 48888  
Ph 989-831-5807  
Email fmogdis@montcalm.cc.mi.us

##### Virginia Himich, Region 5

1125 Sunrise Park Dr, Howell, MI 48843  
Ph 517-548-2194 Email himichv@michigan.gov

##### Terry Counihan, Region 6

1371 Club Drive, Bloomfield Hills, MI 48843  
Ph 248-332-5431 Email terrycounihan@att.net

##### Dennis Zimmerman, Region 7

716 E Forest, Lake George, MI 48633-0325  
Ph 989-588-9343

##### Rick Jordan, Region 8

14335 Lake St, LeRoy, MI 49655-8261  
Ph 231-768-5057 Email rdjordan98@yahoo.com

##### Rex Keister, Region 9

4582 N. Spider Lake Rd.  
Traverse City, MI 49686  
Ph 231-947-2868 Email rdkeister1@juno.com

##### Leo Schuster, Region 10

3021 Marion, Lewiston, MI 49756  
Ph 989-786-5145 Email lschuste@2k.com

##### Cecile Kortier, Region 11

18200 Valerie Dr., Hillman, MI 49746  
Ph 989-742-3104 (fax same number)

##### Wally Justus, Region 13

20376 Williamsburg, Dearborn Hts. MI 48127  
Ph 313-271-3777 Fax 313-336-0730

##### Arny Domanus, Region 15

N 4176 Kari-Brooke Lane,  
Watersmeet, MI 49969  
Ph 906-358-9912 Email arnyd@portup.com

#### Directors At Large

##### Pam Tynning

1811 4 Mile Rd. NE  
Grand Rapids, MI 49505  
Ph 616-361-1493

##### Dr. Niles Kevern

1733 Ann St.  
East Lansing, MI 48823  
Ph 517-351-4786

# ML&SA NEWS

## MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

P.O. Box 249, Three Rivers, Michigan 49093

Ph 269-273-8200

Fax 269-273-2919

Email [info@mlswa.org](mailto:info@mlswa.org)

[dwinne@mlswa.org](mailto:dwinne@mlswa.org)

Web sites [www.mlswa.org](http://www.mlswa.org)

[www.mi-water-cmp.org](http://www.mi-water-cmp.org)

Donald E. Winne, Executive Director

## Lake and Stream Leader's Institute – Class of 2004

The Lake and Stream Leader's Institute, "Class of 2004" is now being formed. Anyone interested in participating in this significant educational program should get his or her application in very soon. Applications must reach the MLSA office before March 1, 2004.

The Institute employs a combination of lectures, classroom activities, readings, homework assignments, field experiences and an applied project in seven sessions to improve a participant's understanding of water resource management.

The sessions will be held at the Ralph A. MacMullan Conference Center on Higgins Lake, at the Bengel Wildlife Center near Lansing and at the Kellogg Biological Station near Kalamazoo. Those attending the Institute must commit to attending all sessions and preparing an applied project.



The registration fee is \$195 (\$100 for students). Additionally, participants will have expenses for their chosen applied project.

For additional information and a registration packet contact:

Mr. Howard Wandell  
Dept of Fisheries and Wildlife  
Rm 13, Natural Resources Bldg  
Michigan State University  
East Lansing, MI 48824-1222

Phone 517-432-1491

Email [wandellh@msu.edu](mailto:wandellh@msu.edu)

# MICHIGAN LAKE AND STREAM ASSOCIATIONS, Inc.

*"Water For The Twenty First Century"*



## LEARN ABOUT MICHIGAN'S WATER RESOURCES

The 2004 ML&SA Annual Conference will be the 43rd statewide conference for members of Michigan Lake and Stream Associations and the General Public.

Co-sponsored by:  
Michigan Lakes & Streams Foundation  
Michigan Waterfront Alliance  
The Michigan Loon Society  
Trout Unlimited  
The Michigan Riparian Cooperative Lakes Monitoring Program

*Michigan citizens have come a long way during the last decade in understanding more about our water and other natural resources. Yet more learning needs to go forth if we are to give future generations a legacy of clean and healthful water.*

Fish advisories from the Michigan Department of Community Health for the year 2003 tells us that we are not free of contaminated fish in our lakes and streams. The year 2003 fish consumption guide warns the general population that most full size predatory fish such as northern pike, walleye and large mouth bass should not be eaten at any time. The advisory limits the number of meals that may be eaten of various species of fish from the Great Lakes and from some inland lakes and rivers.

From the Great Lakes and from some inland lakes and rivers water clarity readings on many lakes decrease significantly from spring measurements to summer and fall.

## MLSA – 43rd ANNUAL CONFERENCE

April 23, 24, 25, 2004

Boyne Mountain Resort,  
Boyne Falls, Michigan

This seasonal change results from motorized watercraft churning up the bottom sediments and putting phosphorus back into the water column. Increased waste from septic systems and other human activities cause algae blooms in late summer and fall. As a result of these increased nutrients, both bottom rooted and free floating plants proliferate making the use of the surface waters difficult and unenjoyable.

*These trends demand that we acquire a better understanding of how our activities on land and on the water affect the quality of water in our lakes and streams. We trust YOU will plan on attending ML&SA's 43<sup>rd</sup> Annual Conference and find out how you can be a part of the solution to problems on your lake and for the lakes of the State.*

### Are you concerned about:

- Zoning, development –
- Invasive Plants spreading throughout the state that are causing problems in forests, lakes, streams-
- Working with local government-
- What is happening to the fish population-
- Large Mammals and Bovine TB-
- Road-end legal issues-
- How important it is to protect the Loon population-
- Pollution of surface waters by concentrated animal feeding operations-
- Ground Water Uses and Regulations-
- What's happening to your lake/stream shoreline-
- Water safety on your lake-

**Are you interested in helping to protect your lake or stream? Attend the conference and learn how you and your association can take part in protecting your lake and stream. Other educational programs will take place on the following subjects:**

- The CLMP training sessions.
- The Aquatic Plant ID and Management Session.
- School – Lake/Stream educational partnership program.
- Learning to work with your local government.
- Developing a website to educate your association's members.
- Effective landscaping and buffer strips.
- Lakes and Streams Leadership Institute.
- And more.....

**Do you have questions that you want answered by the "Almost World Famous ML&SA Open Forum –Experts?"**

- Attend the Friday evening Forum and meet the experts.
- And more.....



---

# AQUATIC NUISANCE CONTROL: NEW RULES AND RECENT CHANGES

---

*By Laura A. Esman, Michigan Department of Environmental Quality,  
Water Division, Inland Lakes and Remedial Action Unit  
January 9, 2004*

Aquatic plant management in Michigan is regulated by the Aquatic Nuisance Control (ANC) Program housed within the Michigan Department of Environmental Quality's (MDEQ's) Inland Lakes and Remedial Action Unit. The ANC Program is responsible for issuing permits for chemical treatment control aquatic nuisances, such as aquatic plants and algae, and swimmer's itch. These permits are issued pursuant to the Public Health Code, 1978 PA 368, as amended (Act 368), the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereunder.

The administrative rules for the ANC program were originally promulgated in 1978. Due to their outdated and ambiguous nature, the MDEQ decided to begin development of new rules in November, 2000. This process involved convening a stakeholders group made up of state agencies, environmental and resource groups, and the chemical industry to develop a draft rules package. After public review, the new administrative rules were promulgated in March, 2003. The major changes in the administrative rules include:

- Permit by Rule – Ponds with a surface area of less than 10 acres that do not have an outlet and have no record of state threatened or endangered species may be chemically treated for aquatic nuisances without obtaining a permit from the MDEQ. In this case, the administrative rules provide the authority for treatment. If the pond is under multiple ownership, written permission must be obtained from every person with bottomland ownership. There are requirements to maintain records of treatment and make them available to the MDEQ.
- Riparian contact information required – The new rules require contact information for individuals with specific knowledge of the chemical treatment, rather than requiring contact information for riparians. This change in requirements will aid the MDEQ in obtaining treatment information in the case of a public health or environmental emergency. In addition, the new rules offer an exception to the required contact information for those applicants who have filed an Emergency Notification Procedure with the MDEQ (see rules for definition).
- Lake Management Plan (LMP) requirement for whole-lake treatments – For all permit applications proposing a whole-lake treatment (currently only fluridone), an LMP must be submitted to the MDEQ. The LMP requirements mimic those of the three year Lake Vegetation Management Plan that was required under the past Interim Fluridone Strategies, and incorporate a few new requirements. The DEQ convened a work group to develop guidance for the LMP which is currently available on the internet at [www.michigan.gov/deq](http://www.michigan.gov/deq).
- Permissions and record-keeping requirements – The new administrative rules require that an applicant obtain written authorization for each person who owns bottomlands within the treatment area. These permissions must be maintained for one year after the permit expires. The only exception for obtaining permission from bottomland owners occurs when there is a Lake Board governing the aquatic plant management activities or there is a Special Assessment District developed through the Township for aquatic plant management. In these cases, the Lake Board and the Township are authorized to grant permission for chemical treatment.
- Authority to issue General Permits (GP) – A GP is a permit issued by the MDEQ which states specific criteria for a waterbody, chemicals and rates that are allowable for use, and conditions to be followed for the chemical treatment. Once a GP has been issued, if the waterbody being proposed for treatment fits the specified criteria under the GP, an applicant may apply for a Certificate of Coverage under that GP. Currently, the MDEQ has issued one GP for small storm water retention ponds. It is available on the internet at [www.michigan.gov/deq](http://www.michigan.gov/deq). The MDEQ will continue to explore other categories of treatments appropriate for a GP.
- Increase in review timeframe – The review timeframe for permit applications is still 15 working days for a complete application received for a Certificate of Coverage under a GP. For all other permit applications, the MDEQ must issue a permit, grant a permit in part, or deny a permit within 30 working days after the receipt of a complete application.
- Changes in shoreline posting requirements – The new administrative rules allow alternate posting locations

when the required locations are impractical or infeasible. To gain approval, an applicant must submit an alternate posting proposal with the permit application and have it approved as part of the permit. There are also new posting sign requirements which include: a minimum poster size, attachment to a supporting device, and inclusion of the waterbody name, specific sign removal language, and the expiration date of water use restrictions for each chemical used.

In addition to the new administrative rules, there have been recent changes to the ANC program to meet the challenges of increasing permit demand and state budgetary problems. The 2003 PA 164 was signed by Governor Granholm on August 12, 2003 revising the fee schedule in Act 368. **The new fees are based on the proposed treatment area size, not waterbody size, and consist of the following:**

- Certificate of Coverage under a GP, fee is \$75.
- Treatment areas less than 1/2 acre, fee is \$75.
- Treatment areas of 1/2 acre or more but less than 5 acres, fee is \$200.
- Treatment areas of 5 acres or more but less than 20 acres, fee is \$400.
- Treatment areas of 20 acres or more but less than 100 acres, fee is \$800.
- Treatment areas of 100 acres or more, fee is \$1500.

The increase in permit application fees has allowed the ANC Program to hire three additional full-time staff. These positions were filled in December 2003 and the new staff are currently reviewing permit applications.

If you need to obtain a permit application form, please contact us by mail at:

- Inland Lakes and Remedial Action Unit  
MDEQ – Water Division  
P.O. Box 30273  
Lansing, Michigan 48909-7773
- or email us at [deq-lwm-anc@michigan.gov](mailto:deq-lwm-anc@michigan.gov)
- or download from our website at [www.michigan.gov/deq](http://www.michigan.gov/deq), click on WATER, then INLAND LAKES & STREAMS, then AQUATIC NUISANCE CONTROL

More information on the ANC program, including status of permit applications, treatment report forms, and fluridone procedures is available from our website at [www.michigan.gov/deq](http://www.michigan.gov/deq).

## PRO-RIPARIAN MICHIGAN APPELLATE COURT CASES REGARDING LAKE ACCESS EASEMENTS

by: Clifford H. Bloom  
Law, Weathers & Richardson, P.C.

Recently, the Michigan Court of Appeals issued its unpublished opinion in *Dyball v Lennox* (decided November 18, 2003—Case No. 241296). That case involved a 16-foot wide ingress and egress easement for backlot owners to Fenton Lake. Even though a dock and boat may have been utilized on the shore of the easement at the lake for many years (and potentially even at the time the easement was created), the Court of Appeals reaffirmed long-standing case law indicating that where a simple lake access easement is involved, it normally cannot be used for dockage, permanent boat moorage, sunbathing, lounging, etc. In other words, such lake access easements can only be used for travel purposes. Michigan Lake & Stream Associations, Inc. filed an *amicus curie* brief on behalf of the riparian property owner in this appeal.

*Dyball* is just the latest in a series of Michigan appellate court decisions over the years which have held that absent express language in an easement permitting dockage or permanent boat moorage (or the presence of prescriptive rights), lake access easements with the following language (or similar wording) are for travel purposes only—that is, no dockage, shorestations, permanent boat moorage, sunbathing, lounging, etc. can occur:

- “Ingress and egress to the lake”
- “An easement to the lake”
- “A right-of-way to the lake”
- “For access to the lake”

The two key cases in this area are *Delaney v Pond*, 350 Mich 685 (1957) and *Thies v Howland*, 424 Mich 282 (1985). See also, *Schofield v Dingman*, 261 Mich 611 (1933). Additionally, the following unpublished Michigan Court of Appeals cases are also helpful to riparian property owners:

- I. *Gross v Mills* (unpublished Michigan Court of Appeals decision No. 21176, decided September 28, 1999)
- II. *Hoisington v Parkes* (unpublished Michigan Court of Appeals decision No. 204515, decided March 12, 1999)
- III. *Krause v Keeler Twp* (unpublished Michigan Court of Appeals decision No. 220692, decided July 28, 2000)
- IV. *Miller v Peterson, et al* (unpublished Michigan Court of Appeals decision No. 111358, decided December 27, 1989)
- V. *Trustdorf v Benson, et al* (unpublished Michigan Court of Appeals decision No. 103109, decided December 21, 1989).

Although an unpublished Michigan Court of Appeals decision is not technically binding precedent, it can be utilized by both trial and appellate courts for insight and as a guide if considered persuasive.

While some backlot owners will attempt to “spin” the decisions by the Michigan Supreme Court and Court of Appeals in *Little v Kin*, 249 Mich App 502 (2002); modified in 468 Mich 699 (2003), the Michigan Supreme Court’s opinion in that case is actually fairly pro-riparian property owner. Pursuant to that decision, unless a lake access easement has express dockage or boat moorage language (or a prescriptive right expanding the usage rights can be proven), the easement can almost never be used for dockage or permanent boat moorage, even if there is a long history of such use. The final Michigan Supreme Court decision in *Little v Kin* puts a heavy burden on backlot owners to prove that a lake access easement can be used for anything other than travel.

(Continued on page 21)

# Water, water everywhere?

WHO OWNS AND CONTROLS THE SURFACE AND GROUNDWATERS OF THE STATE OF MICHIGAN? The answer to this question is probably that no one owns the water either above or below the ground surface. Controlling water is another question.

## CONTROL OF SURFACE WATER

In Michigan, the legislature has delegated authority to townships, villages, cities and counties to regulate and control water uses and levels of lakes and streams. Other authority to regulate and control surface water has been reserved to the State, and has been delegated by the legislature to such agencies as the DNR, DEQ, and drain commissioners.

County Circuit Courts can set legal levels for lakes and streams, and authorize dams and weirs that are maintained by county commissioners.

The DEQ has the authority to regulate and control surface waters through The Natural Resources & Environmental Protection Act, Act 451, P.A. of 1994, Part 301. A person cannot do any of the following without a permit from the DEQ:

1. Dredge or fill bottomland.
2. Construct, enlarge, extend, remove, or place a structure on bottomland.
3. Create, enlarge, or diminish an inland lake or stream.
4. Structurally interfere with the natural flow of an inland lake or stream.
5. Connect any natural or artificially constructed waterway, canal, channel, ditch, lagoon, pond, lake or similar water with an existing inland lake or stream for navigation or any other purpose.

Water in National Parks and Federal Forests are regulated and controlled by the Federal government. The powers of the Federal government are delegated powers as defined by the United States Constitution. Powers not delegated to the Federal Government are reserved to the States and to the people.

## CONTROL OF GROUNDWATER

Michigan lacks groundwater use law. However, some bills have been introduced to look at Michigan's groundwater resources.

Ken Sikkema, Republican, Wyoming introduced a bill in 2002 that would have required state permits for well owners who have the capacity to pump 100,000 gallons per day (70gpm). This bill never moved. Mr. Sikkema is now co-sponsoring Senate Bill 289 introduced on March 11, 2003 by Senator Patty Birkhols, R-Saugatuck. The purpose of this legislation is to get a better understanding of Michigan's groundwater resources.

Interest in regulating groundwater stems from conflicts in areas of the State with limited groundwater supplies.

Another concern has developed over the pumping of groundwater from wells in Morton Township, Mecosta County by Nestle Water North America, Inc.

The pumping of groundwater up to 400 gpm resulted in lowering the water level in lakes, streams and nearby wetlands. This triggered the filing of a law suit by Michigan Citizens for Water Conservation, and a Circuit Court ruling to terminate all water withdrawals of "spring water" from the wells. A stay of the order was permitted by the Appeals Court until mid-January.



THE GREAT LAKES—THE LARGEST FRESH WATER SYSTEM ON EARTH  
(Map, courtesy U.S. ARMY CORPS OF ENGINEERS, Detroit Office)

It has been generally accepted that a property owner has the right to drive a well on his property to draw ground water for domestic purposes. When he draws more than the average annual recharge amount on his acres of land, then should he not get permission from his neighbor to withdraw their entitled groundwater?

The insert map shows the Great Lakes and their surrounding watershed. The 8 Great Lakes states and the Canadian provinces that border on the Great Lakes have taken the position that Great Lakes water should not be transported outside the Great Lakes watershed. If Nestle is permitted to ship millions of gallons of water outside the Great Lakes Basin, where will it end?



# MICHIGAN WATERFRONT ALLIANCE

The Michigan Waterfront Alliance is a nonprofit corporation formed to protect, preserve, and promote the wise use of all inland waters of the State of Michigan.

Annual dues for individual membership in Michigan Waterfront Alliance is \$25.00 per year. Commercial and individual donations are needed and appreciated. Checks should be made out to Michigan Waterfront Alliance and mailed to Pearl Bonnell at P O Box 204, Long Lake, MI 48743.

The Alliance has been very active in promoting favorable legislation that will benefit riparian property owners throughout the State. For more information, find us on the web at: [www.mwai.org](http://www.mwai.org)

If you want to become a MWA member, complete the application below and mail to Pearl Bonnell.

## Membership Application

Annual dues for individual membership in the Michigan Waterfront Alliance are \$25.00 per year. Commercial and individual donations are needed and appreciated.

---

Name

---

Address

---

---

---

Township

---

Phone

---

Email



## DICK MOREY AND PAUL HARTSIG TEAM UP TO MEASURE MAGICIAN LAKE WATER

Last spring Union High School science teacher Paul Hartsig and Magician Lake President Dick Morey attended the Michigan Lake & Stream Association (ML&SA) conference at the Department of Natural Resources center at Higgins Lake. The conference was in conjunction with a grant the pair received to conduct water quality testing of Magician lake. The grant consisted of approximately \$3,000 worth of water testing equipment, handheld computers, and various water testing probes. The Magician Lake Association contributed \$400 to buy more equipment and pay for the expenses of a field trip for Hartsig's fifth hour Earth Science class.

Hartsig's students spent several class periods preparing for the field trip. Students discussed methods of gathering water and plant samples from the lake. Morey recruited local lake residents to donate the use of pontoon boats which served as floating laboratory stations. Each group of students was responsible for gathering samples from different parts of the lake. These water and plant samples were taken back to Hartsig's class where the water was tested for various items such as dissolved oxygen, nitrates and chlorides. The students also assembled presses to prepare individual plants for mounting and identification.

Students from Mr. Hartsig's class made the following comments: "I like to fish and swim in the lakes, so it is important to me that they are healthy," freshman Kevin Simpson stated. "I think it is important to have clean, fresh water because of the importance that water plays in our lives," added freshman Felipe Gasca.

The results gathered from the water testing was included with information from 13 other schools and sent to ML&SA headquarters. The plant samples will serve as a larger aquatic plant catalog and will be collected four times over the next two years with future classes.

"We live in a unique area of a unique state — water is everywhere you look around here. If students can gain a better understanding of the important role water plays in our lives, they will be less apt to take it for granted," said Hartsig. The class is planning another field trip in the spring with a new group of students taking over the second year of the grant.

# Fish Facts

---

## Mercury in the Environment

*Mercury is a naturally-occurring metal which is present at very low levels in bedrock, soil, and water throughout Minnesota. This fact sheet describes mercury's properties and its presence in the environment, how it bioaccumulates in fish, its toxicity in humans, and how the data on mercury in fish is used in developing fish consumption advisories for Minnesota.*

### Mercury Pollution

---

Mercury evaporates from rock, soil, and water into the air. Mercury then returns to earth attached to small airborne particles or as a water-soluble form washed out of the air by rain or snow. The Minnesota Pollution Control Agency estimates that 25 percent of the mercury that reaches Minnesota's land and lakes is natural in origin, coming from rocks or volcanic activity. The remaining 75 percent of newly deposited mercury comes from human activities.

Major sources of this airborne mercury include fungicides in latex paints (a practice that is no longer legal), burning of coal and other fossil fuels, and burning of municipal solid waste. In addition, mercury can be released into surface water as waste, as has been the case with past mercury pollution of the Minnesota and Mississippi Rivers. In some countries, mercury compounds containing phenyl- or methylmercury may still be used as fungicides.

Studies of sediment cores from Minnesota and Wisconsin lake beds show mercury concentrations in lake sediments significantly increased around 1850 and again between 1920 and 1950. Mercury reached these study lakes from the atmosphere.

The rate of increase of mercury deposition in these lakes has been about 1.7 percent per year over the 140 years since 1850. National and international efforts to prevent air pollution are needed to reduce mercury contamination of lakes and rivers.

### Mercury Chemistry

---

In the periodic table of elements, mercury is denoted by the symbol Hg. Elemental mercury, the silver metal in thermometers, is poorly absorbed from the gut. Less than 0.01% is absorbed. Very large amounts would need to be swallowed to cause toxicity. When elemental mercury is heated, it evaporates. Mercury vapor is easily absorbed by the lung and is a potential health threat to people who breathe it. The toxicity of mercury vapor is a known occupational hazard.

In lakes and rivers, elemental mercury can be transformed to methylmercury ( $\text{CH}_3\text{Hg}^+$ ) by chemical processes and by the action of bacteria. In contrast to elemental mercury, *methylmercury* is almost completely absorbed by the gut, and is toxic to people.

### Methylmercury in Fish

---

Methylmercury in lakes and rivers is absorbed by tiny aquatic organisms. Methylmercury builds up in the food chain, accumulating in increasing amounts as small invertebrates are eaten by small fish, which in turn are eaten by large fish.

Methylmercury builds up to high levels in predatory fish that are at the top of the aquatic food chain. Methylmercury accumulates in fish at much higher concentrations than in the surrounding water. For example, water contaminated with two parts per trillion mercury ( $2 \times 10^{-12}$  grams Hg/ml water) can produce levels of 450 parts per billion methylmercury in a northern pike ( $450 \times 10^{-9}$  grams Hg/g fish). This is a 225,000-fold bioaccumulation of mercury.

Bioaccumulation produces high concentrations of methylmercury in the fish people eat. Methylmercury attaches to the protein of fish and thus cannot be removed by cooking or cleaning the fish.

### Mercury Toxicity

---

Scientists don't know if methylmercury harms the fish in Minnesota lakes. But they do know that methylmercury could harm humans and wildlife that eat methylmercury-contaminated fish.

Methylmercury's toxicity to humans is an environmental hazard recognized since the late 1950s. The first known epidemic of mercury poisoning resulted when people living near Minimata Bay in Japan were poisoned when an industry released mercury and methylmercury into Minimata Bay.

Residents of nearby fishing villages were poisoned over many years by unwittingly eating highly-contaminated fish from the bay before the source was discovered.

Methylmercury is neurotoxic; it affects the brain and spinal cord. Methylmercury is almost completely absorbed from the gut into the blood, is distributed throughout the body, and passes into the brain to reach nerve cells. In the brain, methylmercury interferes with the way nerve cells function. For this reason, methylmercury poses some special concerns for the developing fetus and for young children.

## Symptoms of Toxicity

The earliest obvious signs of methylmercury poisoning in adult humans include tremor of the hands and paresthesias (abnormal sensations of the lips, tongue, fingers or toes). At higher levels, walking is affected, followed by blurred vision and decreased peripheral vision. Severely-affected patients have speech and hearing problems. If methylmercury exposure continues, a person can become paralyzed and die.

In the early 1970s, more than 400 people in Iraq died from eating bread made from methylmercury-treated wheat that was intended for planting. During the Iraq poisoning, researchers found that children exposed in utero experienced delayed development in walking and talking when the level of mercury in their mothers' body was four- or five-fold lower than levels known to cause symptoms of poisoning in adults.

Fetuses are especially susceptible to methylmercury. At high levels of exposure methylmercury interferes with the way nerve cells move into position as the brain develops. As a result, the brain does not develop normally.

In both the Japan and Iraq disasters, some mothers who showed few obvious symptoms of mercury poisoning gave birth to children with severe mental and physical retardation.

## "The Dose Makes the Poison"

Methylmercury toxicity is related to the dose – the amount taken into the body – and the duration of exposure. While fish seem to accumulate methylmercury throughout their lives, humans can eliminate methylmercury from their bodies over a period of months. When the amount of methylmercury taken into the body exceeds the amount that can be eliminated, methylmercury builds up in the body.

Methylmercury is attracted to sulfur atoms on cells and attaches to sulfur-rich proteins, such as those in muscle, throughout the body. At a certain level in the blood, methylmercury harms the cells of the body.

Data relating clinical symptoms of poisoning to mercury levels in blood and hair come from studies of methylmercury poisoning in Iraq. Paresthesias occurred at blood levels around 200 nanograms mercury per milliliter of blood (200 ng/ml), which is equivalent to a daily methylmercury intake of 0.3 milligrams methylmercury per 70 kilogram body weight per day. A maternal blood level four or five-fold lower is associated with developmental delays in fetuses.

To calculate meal advice for mercury-contaminated fish, the Minnesota Department of Health uses a level of mercury in the blood 10-fold lower than the blood levels associated with the first symptoms of toxicity. Advice on meal spacing is based on information about the length of time it takes for people to eliminate methylmercury. By following the MDH advisory, blood levels of mercury would not exceed 20 ng/ml for an adult and 4.7 ng/ml for women of childbearing age.

## The Fish Consumption Advisory

Mercury levels of less than 0.16, 0.16 to 0.65, 0.66 to 2.8, and more than 2.8 parts per million in fish correspond to meal advice categories of unlimited meals, one meal a week, one meal a month, and do not eat, respectively. This advice protects the average adult (except pregnant women) who eats fish all year round.

For women of reproductive age and children who eat fish year-round, levels of less than 0.16, 0.16 to 0.65, and more than 0.66 parts per million correspond respectively to meal advice categories of one meal a week, one meal a month, and do not eat.

The *Minnesota Fish Consumption Advisory* provides less restrictive advice for people who eat fish only a few months or weeks of the year.

Minnesota Department of Health  
Division of Environmental Health  
121 East Seventh Place, P.O. Box 64975  
St. Paul, MN 55164-0975

FOR THE MICHIGAN FISH CONSUMPTION  
ADVISORY FOR 2003 THRU MARCH 2004  
— go to the MDCH web site at:  
[www.mdch.state.mi.us/pha/fish/index.htm](http://www.mdch.state.mi.us/pha/fish/index.htm)

## PRO-RIPARIAN COURT CASES... (Cont. from page 17)

Occasionally, backlot owners will cite one or two other Michigan appellate court decisions for the proposition that simple lake access easements can be used for dockage, permanent boat moorage, sunbathing, etc. However, if one carefully studies those few cases, they either do not stand for that proposition or contain highly unusual fact situations which are rarely applicable.

The case law involving public roads which end perpendicular at lakes is slightly different than that involving private lake access easements. The Michigan appellate courts have also held that permanent boat mooring, private dockage, sunbathing, lounging, and similar activities cannot occur on road ends at lakes. However, the presence of one public dock is permitted for temporary mooring to aid navigation. Accordingly, if a private individual places a dock at a public road end, it becomes public and can be utilized by anyone for temporary mooring only. *Jacobs v Lyon Twp*, 199 Mich 667 (1993), is the key case in this area. *Jacobs* was recently reaffirmed by the Michigan Court of Appeals in *Higgins Lake Property Owners Ass'n v Gerrish Twp*, 255 Mich App 83 (2003); *lv den* 469 Mich 902 (2003). See also *Higgins Lake Property Owners Ass'n v Gerrish Twp* (unpublished Michigan Court of Appeals decision No. 235418, decided October 30, 2003).

It should be noted that even activities which might normally be allowed on lake access easements and at public road ends can be further regulated (or even prohibited) by local ordinance. Furthermore, dockage and permanent boat moorage at private lake easements or public road ends still normally require a marina permit from the Michigan Department of Environmental Quality.



**ML&SA's EXECUTIVE DIRECTOR SENDS  
MESSAGE TO MEMBERS OF THE HOUSE  
COMMITTEE ON CONSERVATION & RECREATION  
(OCTOBER 27, 2003)**

---

The message was in support of House Bill #4141, introduced by John Stakoe and 12 other members of the House.

“It is rumored that the Committee on Conservation and Recreation may consider “grandfathering” the right of individuals that have been placing boat hoists and anchoring boats off roads that terminate at the shoreline of lakes and streams, to continue to do so.

Permitting non-riparians to place hoists and anchor boats off road ends would make a mockery of “riparian” law as established in Michigan by Supreme Court decisions such as *Lorman v Benson* (1860); *Thompson v Enz* (1967); *Burt v Monger* (1946); and *Theis v Howland* (1985).

Our country is founded on respect for law, and legalizing a violation of either common or statutory law is an affront to all law-abiding citizens and should not be given any consideration by members of the Michigan legislature.

Basic to American constitutional law is the separation of powers into legislative, executive and judicial branches. Power has been placed in the Judicial branch to determine when the action of legislative or executive branches at the state or local, state or national level, has overstepped the limitations prescribed by the federal or state constitutions.

The purpose of HB #4141 is not to subvert 140 years of Court decisions in Michigan, but to guarantee the right of access and use of the entire surface of navigable inland lakes and streams. To grant special privileges to backlot owners would be contrary to riparian law as it has developed in the State of Michigan.

---

**WATERSMEET TOWNSHIP, GOGEBIC COUNTY UPDATES “Keyholing” ORDINANCE**

“Keyholing,” also known as “funneling” or “pyramiding,” is the developing of off-water properties or residences, adjacent or contiguous, to lake front properties, with the intent of allowing the off-water property owner(s) access to the water through an adjoining or nearby water property. This practice is prohibited by this ordinance. It is intended that the rights to waterfront access be reserved solely to the fee-simple owners of each individual private water front parcel, or lot, and that no other persons be permitted waterfront access (for recreation or any other purpose) to those waterfront lands by lease, license, easement, or other non-fee simple property arrangement.

*Article Five, Section 5.03 of the  
Watersmeet Township Zoning Ordinance.*

**BECOMING AN ML&SA STEWARD  
TO HELP SAVE  
MICHIGAN'S LAKES AND STREAMS**

For over forty years MLSA has been working to protect Michigan’s lakes and streams by empowering associations and riparians. Much has been accomplished, but to expand upon past successes, MLSA must prepare for the future. We need your help. MLSA has begun a campaign entitled “*not waiting for the future.*” Including an effort to identify “One Thousand Stewards,” individuals who respect Michigan’s water resources and believe in MLSA’s cause and who are willing to financially contribute to MLSA at some level above the “individual membership” rate of \$35.

Please take a moment and consider joining the One Thousand Stewards. Complete the form below and mail it with your donation to MLSA, P.O. Box 303, Long Lake, MI 48743-0303.

**Membership in the One Thousand Stewards**

Individual	\$35 _____	Investor	\$60 _____
Champion	\$100 _____	Patron	\$250 _____
Benefactor	\$500 _____	President’s Club	\$1,000 _____

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_