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THE MICHIGAN RIPARIAN

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PUBLISHING OFFICE

300 N. State St., Suite A
Stanton, MI 48888

PUBLISHER • Sharon Wagner

Phone 989-831-5100

E-mail info@mi-riparian.org

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FROM THE PUBLISHER

I hope this issue of The Michigan Riparian finds you enjoying beautiful summer weather on your lake and creating fond memories with family, neighbors and friends.

This issue features another front-page article, rich in history and nostalgia, that we think you will enjoy. Duck Lake, located in Muskegon County, has an interesting historical background. We appreciate the pictures and details the author contributed to share with our readers.

So...time travel back to the 1600's to present day on Duck Lake; take in the early history of Native Americans, the resort era that followed extensive lumbering operations, boy scout camps and conscientious lake stewardship. Not to name-drop, but we think you might be surprised to read about several prominent leaders involved in the development of Duck Lake and the connections with two presidents. The article is a fascinating story of the evolution of a well-loved lake area.

In each issue of The Michigan Riparian, we choose topics and questions that frequently come to the minds of our readers. For those who are interested in preventing the spread of Aquatic Invasive Species or learning more about The Michigan Aquatic Invasive Species Advisory Council, you'll glean lots of information inside this issue. Integrated Lake Management on page 25, and the latest court case restricting lake access on page 29, are eye-opening and educational. Have a question about easements? See Cliff Bloom's article on the subject. He addresses your questions and gives good insight on the topic.

Did you know that Michigan Lake and Streams just celebrated their 52nd Annual Conference in Bay City this spring? See page 20 for conference details and highlights. It was another successful event!

Keep sending us your pictures, stories and questions. We love to hear from you

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Enjoy the summer!

-publisher, Sharon Wagner

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00 CONTENTS

- 5 Duck Lake: A Muskegon County Treasure
- 13 Smart Water Gardening and Habitattitude™ Can Prevent the Spread of Aquatic Invasive Species
- 15 Attorney Writes: What Are Easements
- 16 MLSA Newsletter
- 18 An Open Letter to the MI State Waterways Commission and the MI DNR from ML&SA
- 19 Alpena Youth Explores Invasive Rusty Crayfish
- 22 Love My Lake
- 23 Lake Happenings
- 24 An Update on the Michigan Aquatic Invasive Species
- 25 The Art and Science of Integrated Lake Management
- 29 Another Court Case that Restricts Lake Access

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DUCK LAKE

WHITEHALL, MICHIGAN

There is more than one Duck Lake in Michigan, but the one on the west side of the state between Muskegon and Whitehall channeling into Lake Michigan is a very unique "Duck Lake". Not known for its size or heavy watercraft activity, it is a very well-kept local secret for its spring-fed crystal clear waters, tranquility and award-winning Lake Michigan sunsets. Duck Creek feeds into the lake on the east; and, at the west end of the lake, Duck Lake channels into Lake Michigan. There is a small 20" dam or weir under the Duck Lake Bridge which was installed in the 1930's to limit boat access and to help maintain lake levels.

The "Channel", as locals affectionately refer to the area, has a backdrop of towering sand dunes and access to miles of pristine Lake Michigan beach. If one did not know the difference, you would think you were on an East Coast beach looking out on the Atlantic. Located on Scenic Drive, the beach has been a popular gathering place for swimming, sunbathing and spectacular sunsets for decades. On the south shore of the lake is a diverse cross section of both summer homes and year-round residences that total fewer than 50. On the north side of Duck Lake is the Duck Lake State Park that opened in 1988. The day use



*Sunset Duck Lake Channel & Lake Michigan
Photo by John Penrod*

only park encompasses 728 acres and has parking for Lake Michigan visitors at Duck Lake Channel, a boat launch and a picnic pavilion. The entire area, once known for its virgin white pine that was lumbered off by the end of the 19th century, is still forested by majestic white pine, beech, oak and hemlock.

Duck Lake is rich in history that dates all the way back to the mid 1600's. It is really broken into five eras; Indians and Early Explorers, Lumbering, Fruit Farming and Resorts, Scout Camps, and Parks and Recreational.

INDIANS & EARLY EXPLORERS

According to a publication in the Smithsonian Institute dated 1644 and titled "Jesuit Relations for the year 1644" a major Indian battle occurred just north of Duck Lake between 2,000 Iroquois who had been pushed to the west by Eastern settlers and 900 local Pottawatomes. The Pottawatome village was under siege for days and suffered a tragic defeat. The victorious Iroquois burned at the stake 70

Continued on page 6



Duck Lake Channel into Lake Michigan Photo by John Penrod

DUCK LAKE

Continued from page 5



of the best warriors from the defeated tribe. This battle was one of the most significant in the region during the early history of the country and shaped the Indian territories for decades to come. After this battle, often referred to as “Indian Point Massacre of 1642”, a vacuum occurred in the region and the Ottawa Indians became the dominate tribe in the 1700’s. Duck Lake grew as an important junction where the Indian Lake-shore trail from the south out of St. Joseph branched into two trails, one heading north to the Straights of Mackinaw and the other northeast inland through what became the city of Whitehall. The local Indians called Duck Lake “Jibski Sagagen”

The French Jesuits explored the region in the mid-1700’s and in 1760 the region became recognized as part of New France. It became part of the British possessions in 1763 after the French and Indian War and in 1796, as a result of the treaties growing out of the Revolutionary War, became part of the United States Territory.

The first white man in the region settled at the mouth of Duck Lake in 1790. His name was Joseph LaFramboisse, a Nova Scotian fur trader and an agent for the region for the famous John Jacob Astor Fur Company. Joseph was killed in an Indian battle in 1809, and his widow, Madame Lizette LaFramboisse, carried on the fur trade business. She went on to expand the fur trading business from her Duck Lake trading post and became the largest and most successful fur trading operation in the Great Lakes region. Inducted in the Michigan’s Woman’s Hall of Fame in 1984, she was cited as “one of the most prominent of early businesswomen” in what was to become the state of Michigan. The trading post was built of logs and plastered with clay and moss and is thought to be the first building erected in the entire region. In 1821 she retired and sold the trading post to Rix Robertson and the location became known as the Robertson Trading Post.

LUMBERING ERA

The first piece of Duck Lake property, 32 acres at the mouth of Duck Lake, was transferred to Orman Coe, of the Wisconsin Territory, on November 16, 1841. In 1844, Charles Mears, a businessman who had migrated from Massachusetts in 1837, had a sawmill in Whitehall and purchased the property at the mouth of Duck Lake. He built a dam at the site of the current Duck Lake Bridge, then a water-powered sawmill, boarding house, store, blacksmith shop and stable. The lumber camp was known as “The Middle House”. Shortly thereafter, he added a steam-powered sawmill on the site as well. In 1856 a United States Post Office was opened in the Duck Lake store, and a three-story boarding house was erected. The small hamlet was called Cork Point. For a number of years, it was the center of activity for the whole surrounding territory. The Duck Lake store supplied the needs of settlers and Indians alike. The local Ottawa population numbered as many as 3,000.

For 25 years Charles Mears was the recognized leader and businessman in

the area. He purchased over 40,000 acres of prime timberlands, mostly from the U.S. Government Land Office for \$1.25/acre, including over 2,000 acres surrounding Duck Lake. He constructed and operated 15 sawmills and built five harbors to transport lumber. One of those harbors was the pier at the mouth of Duck Lake on Lake Michigan. It was serviced weekly by the schooner he built named Propeller that regularly transported lumber to Chicago and supplies back to West Michigan. Mr. Mears also served in the State Senate and was an early member of a newly founded political party, the Republicans. He was a personal friend of Abraham Lincoln. In November of 1858 the two sawmills were destroyed by fire, reportedly by a group of drunken, disgruntled, unpaid laborers. With over 10,000 logs in the waters of Duck Lake,



Duck Lake Mill 1900

a new steam sawmill was shipped from Chicago and ready for production in late 1859. By the late 1800’s the vast forests of towering white pines had been completely stripped from the local landscape, and the lumber industry had moved inland and farther north. Aided by the introduction of railroad service in the state, the boom times of Charles Mears had moved on.

FRUIT FARMS & RESORTS

Because of the lumbering era, regular ferry service was available between Chicago and several ports on the west coast of Michigan, including Whitehall. It was not long before businessmen and their families in hot, crowded Chicago discovered the inviting cool breezes, crystal clear lakes and beautiful sand dunes that the area provided. Lumber barons had cleared much of the land before the turn of the century, but it was quickly learned that the soils and climate were very well suited for fruit and berry farming. Fruit orchards and resorts began to appear in the entire region at the turn of the century.

Following the lumber era, one of Duck Lake's prominent founding families was that of Henrick (Henry) Schneider. Born in Germany in 1837, he first settled in Chicago working in the stockyards and at the age of 20 moved to Duck Lake to make his fortune as a lumberjack working for Mears. He built a log cabin a few hundred yards south of Duck Lake and in 1870 took title, signed by President Ulysses S. Grant, to 154 acres of property south of Duck Lake channel and encompassing over one mile of Lake Michigan shoreline. He built a respectable farm that included several acres of raspberries and fruit trees and also a roofing shingle mill. Each summer his produce ended up in Chicago markets via the Goodrich Boat Company that docked at

Michillinda Beach Lodge a half mile north of Duck Lake. The entire western region soon became known, and continues to be recognized today, as the Fruit Belt. In 1889 Henry purchased 56 acres on the south side of Duck Lake from the Mears family for \$258.00. Thirteen acres were directly on Duck Lake that he would subsequently subdivide into 44 lakefront lots. Henry's pioneering of the Duck Lake area helped make the early 20th century development possible.

Soon, over 15 resorts were operating in the Duck Lake-Whitehall area with four on Duck Lake itself. The majority of the early residents of Duck Lake were first-generation Germans or Swedes and often had connections to family or friends in Chicago. That was the case of the four resorts on the lake in 1920.



Lake View Farm, Duck Lake Inn and Duck Lake Park

All visible from Schneider barn silo

Note absence of all mature trees from lumber era

The **Lake View Farm** resort was typical. The proprietor, Christ Hinze, immigrated from Germany in the late 1800's and bought property on Duck Lake in 1898. He and his family cleared the land, established a berry farm and started taking in summer vacationers from Chicago. By 1920 he had expanded his farmhouse to 14 bedrooms and a dining hall that could seat 125 guests. He had a Model-T Ford that would pick up guests at the Goodrich Boat dock in Whitehall. The resort operated until 1936 when the advent of the automobile detracted from destination vacation spots popular the first part of the century.

The **Duck Lake Inn** was operated by Harry Walters and his wife, who also came from Germany. They purchased property adjacent to the Hinze resort. By 1920 the resort included the main two-story house, guest cottage, kitchen and dining building,



Lakeview Farm 1930

ice house and a dance and pool hall on the lake. Many Saturdays, during prohibition, the dance hall had over a 100 vacationers from miles around enjoying their summer vacations. The Inn operated until Helen Walters died in 1955.

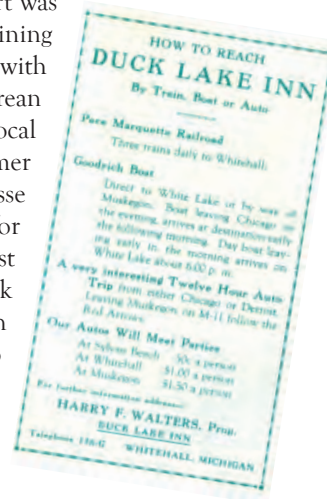


Walters Duck Lake Inn dance pavilion 1925

The **Duck Lake Resort** was started by another first generation German family led by Christ Hesse. The family had been stonemasons in Germany dating back to the 1600's. Christ and his brother Fred had worked in Chicago building cobblestone streets. By the late 1890's, they had saved enough money to come to Duck Lake and buy property on the east end of the lake. They built a home suitable for their family and summer guests and began advertising their summer resort in the 1902 Chicago Tribune. The resort was known for entertaining its summer guests with several Shakespearean plays put on by local actors over the summer season. Christ Hesse was responsible for building the first bridge over Duck Creek resulting in a direct route to White Lake and Whitehall. He later gifted the bridge and access property to the township and it is now known as Nestrom Road.



Chicago Daily Tribune
July 24, 1914



Continued on page 9

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Dear MWA Members and Friends,

Following is a list of topics under review by the MWA Board as high priorities in our effort to protect Michigan's inland lakes and streams. We know only too well that waterfront owners are indeed the last and greatest defense of our lakes and streams.

1. Mission List - Aquatic Invasive Species:
Inventory the waters of Michigan where invasive species exit Acquire and categorize available information of all attempts to control or eradicate the plant and determine the success of control efforts*Identify actions to be taken by the State and designate funding to pay for the control costs*Pressure the State Executive and Legislative branches to provide enhanced funding levels to the MDEQ and the Michigan DNR, particularly in the areas of aquatic invasive species management and Public Act 451 regulatory enforcement*Provide for boat washing facilities and inclusion of sanitary hook-up, where available, when adding or revamping public access ramps*Creation of a State of Michigan inland lakes

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commission focused on a sustainable aquatic invasive species management funding mechanism. Funding mechanism must include at least a partial redistribution of cost of AIS management from lakefront homeowners to the boating and lake user public*Confront and seek a revision of Michigan Waterways Commission policy of continued expansion of public boat launch facilities which exponentially increases the risk for the introduction of new aquatic invasive plants and animals.

2. Continue to educate and/or pressure local government officials and law enforcement to enhance implementation of Public Act 56 which prohibits overnight mooring at public road ends.

3. Continue to "educate" state legislators regarding the need for enhanced regulatory protection of Michigan lakes, streams and

wetlands, including state codification of certain low-impact development techniques near a lake, stream or wetland.

4. Encourage DNR and Fisheries Department to factor the economic and recreational value added to Michigan's residents by lake level control dams or legal lake levels into their recommendations.

5. Swimmers Itch. The DNRE must be convinced that it is much more than just a minor irritation.

6. Gas tax to be used on inland lakes as well as the Great Lakes and designate as grant money for lake associations to request to treat lakes for invasive species/ other projects that protect our inland lakes and streams.

Sincerely,
Bob Frye, MWA Chair

DUCK LAKE



Duck Lake Resort, Whitehall Michigan



Rubens Lake Park Resort 1915

LAKE PARK RESORT

In 1914 Rudolf Ruben and his brother Karin, Swedish immigrants, purchased four acres on Duck Lake for \$600. They built a two-story home and began advertising in the Chicago Daily Tribune for summer vacationers—"Bathing, boating and fishing \$8/week". Over time the Rubens expanded the resort and added seven small cottages and a dining hall. The resort operated until 1937.

SCOUT CAMPS

In 1920 the Evanston Illinois Council of the Boy Scouts of America purchased 100 acres of land on the northwest side of Duck Lake (the old mill site) from Miss Carrie Mears, Charles Mears daughter. It included the channel and several hundred feet of Lake Michigan frontage. They named the camp "Wabaningo" after an Indian chief from the Ottawa tribe in the area in the mid 1800's. Thus began a 50-year era of Boy Scout camping on the north side of Duck Lake. A few years later the Evanston Council purchased the balance of the property on the north shore of approximately 500 acres from the Austin-Cooper family. In 1927 the Grand Valley Council of Boy Scouts located in Grand Rapids, purchased the eastern half of the north side of the lake from Camp Wabaningo and named it Camp Shawondossee. The dedication of Camp Shawondossee in 1928 was attended by several dignitaries including two U.S. Senators, William A. Smith and Arthur Vandenberg.

In the 1930's Camp Shawondossee became well known for its annual Indian Pageant put on by scouts dressed in authentic Indian attire and tracing the early history of settlers and Indian lore of the area. The show



Camp Shawondossee Dedication in 1928

was performed on two weekend nights and people from all around Western Michigan would make the trip. It was not uncommon for the event to have a 1,000 people attend each evening.

The second season of Camp Shawondossee had a camper and staff member who went on to become the 38th President of the United States. President Gerald Ford was an Eagle Scout from the Grand Rapids Grand Valley Council.

Both Scout camps flourished for over 30 years but began to struggle in the 1960's with declining attendance and a slower economy. After the 1968 season, Camp Shawondossee closed and moved to another location in Central Michigan. In 1969 Camp Wabaningo closed and moved to Camp Owasppe on Blue Lake.



Summer camp of the Grand Rapids Boy Scouts



President Gerald Ford standing with flag on right 1929

Continued on page 11

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DUCK LAKE

PARKS & RECREATION

30 Years of Lake Stewardship State Park Expansion

Decades following the lumbering era, over 700 acres of prime forest, 3,500 feet of shoreline and more than 300 feet of Lake Michigan frontage were for sale to the public. For the first time in its history, the lake was vulnerable to major development.

Fortunately the economic picture was weak in the late 60's and early 70's and both properties remained unsold for five years. In 1973 the Nature Conservancy, a land bank not-for-profit headquartered in Washington D.C., purchased both properties for \$714,000. The intent was to inventory the property until such time the State of Michigan could afford to purchase the land for park purposes. In the spring of 1974, the Michigan Department of Natural Resources authorized the purchase of the property and took position that summer. The DNR announced the purchase and stated its anticipated use would be for "Rustic Campgrounds with limited motor vehicle access". A Duck Lake Home Owners Association was formed and began meeting every several weeks monitoring the potential development of the Boy Scout property.

In early 1980, the DNR presented their master plan proposal for the new Duck Lake Park. The plan had somehow shifted from a limited use rustic campground concept to a full-blown family campground facility. The proposal included 200 campsites with toilet facilities, two parking lots—one to accommodate 400 cars and one for 100 cars, a three-acre picnic area and a concession stand. The facility was projected to have 250,000-300,000 visitors annually.

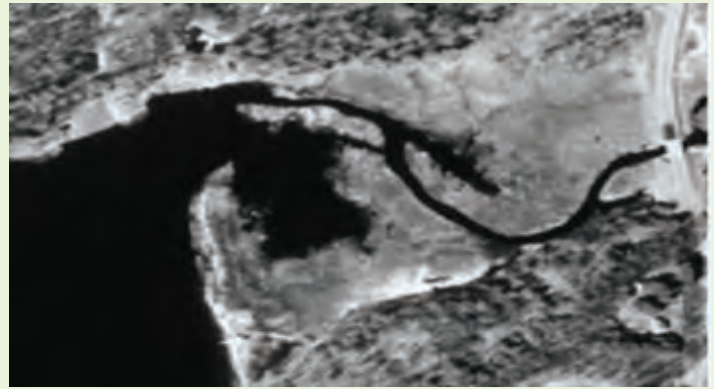
A park of this magnitude would put enormous stress on the lake, and the public was outraged. The homeowners on Duck Lake became even more determined to fight the proposed project. The lake association helped form a new organization specifically to oppose the new park. The group was

called C.A.L.M., Concerned About Land / Water Management. The group was made up of lake residents and concerned citizens in the township. In March, 1980, the DNR held a public hearing, and the lake association and the C.A.L.M. group organized nearly 300 people to go to the hearing and protest. For the remainder of the year, C.A.L.M. and the lake association met nearly every week and continued to organize opposition for the proposed park plan. In December, 1980, the group organized a car caravan and went to Lansing for three days to testify at DNR hearings in opposition of the plan. Finally before year end, the DNR formally withdrew the proposal.

Experiencing such strong opposition to their first proposal, in March, 1983, the DNR formed a Duck Lake State Park Advisory Committee consisting of lake residents, community representatives and park officials. The Committee met monthly for over a year, and a recommendation report was submitted to the DNR in June of 1983. The four-phase plan submitted by the Advisory Committee was accepted by the DNR. Phase One began the next summer and included removing the old scout buildings, building access roads, installing a 100-car parking lot for the Duck Lake Channel/Lake Michigan access and a boat launch. The park was dedicated in 1988. Over a decade of organized, passionate objection by the lake residents paid off, and the development threat of a huge new park project was minimized.

The Marcus Park Dock Dispute

In the early 1950's the Dake family owned a large parcel of property south of Duck Lake



Duck Creek entering Duck Lake 1997



Duck Creek 2010

channel and on both sides of Scenic Drive, including frontage on Duck Lake. In 1961 the parcel without Duck Lake frontage was sold, and in the late 1990's was developed into six single-family home sites and called Winterwood Shores Association. In 1964 the other parcel that included Duck Lake frontage was purchased by prominent Muskegon labor attorney, Ben Marcus. In 1977 Marcus donated a small part of his total parcel, the narrow strip of land on Duck Lake, to Fruitland Township which became Marcus Park. In 1990 the remaining Marcus property was sold to a developer and the Marcus Dunes Condominium project developed with 13 home sites.

In the late 1990's, as homes were built in the two developments, residents began putting boat docks on the Marcus Park property to access Duck lake. A long-running dispute evolved between the Duck Lake Owners Riparian Association and the two developments about the validity of easement rights to the township property. By 2004 nearly a dozen boats were on the park property from the two developments with the potential of over twice that number when fully built. This would represent over 50% of additional boat traffic.

Continued on page 12

DUCK LAKE

The lake association filed a lawsuit contesting easement and access rights in June, 2005, against the owners of both developments and Fruitland Township. The dispute has dragged on in the courts for eight years. In April, 2012, the township, in an unprecedented action, simply gave the Marcus Dunes Association 550' of Duck Lake frontage from Marcus Park in an unsuccessful attempt to extract them from the litigation. A second round of litigation was initiated in 2011 and 2012 and is currently headed to the Court of Appeals for the second time in six years. A ruling is expected in the next 6-12 months. The entire problem all results from ambiguous and very poorly executed land title work dating back over 50 years. As painful as the process has been for lake residents, both in time and financial commitment for legal expenses, it has drawn the members closer together in their efforts to protect the lake from overuse. Just as the lake residents pulled together in the 1980's to protect the lake~this generation has done the same.

The Duck Lake that channels into Lake Michigan just south of Whitehall is small by most metrics, but it has a long, proud interesting history. Its residents have strived to be good stewards of the lake for many decades and oftentimes it has been difficult, but the continued effort is necessary for the good of generations to come.



About the author, David W. Pequet

Dave has been a Board member of The Duck Lake Riparian Association for 12 years and is its current president. He lives in the Chicago area and owns an investment management firm. Dave and his wife have owned a home on Duck Lake for 28 years. His first year on Duck Lake was 1963 as a Boy Scout at Camp Shawondossee. He was a staff member at Shawondossee in 1968, the year the camp closed. Dave@mpi-invest.com

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Smart Water Gardening and Habitattitude™

Can Prevent the Spread of Aquatic Invasive Species

By Jane Herbert and Linda Whitlock
Michigan State University Extension

Does your landscape contain a water garden or ornamental pond? Are you currently shopping for plants and animals for that water feature? Most riparians are aware of the problems caused by Aquatic Invasive Species (AIS), but did you know that several popular water gardening plants and animals appear on Michigan's list of prohibited species?

When non-native plants or animals are introduced into waterways they can become invasive due to an absence of natural controls (predators, disease, climate, etc.) that would normally keep them in check. Exotic non-native plants and animals have proven over and over again their ability to adapt to colder environments and water temperatures. AIS not only negatively impact the aquatic environment; they create negative recreational and economic impacts for individuals, businesses and communities. The cost of trying to control these aquatic invasive species in the U.S. is more than \$100 billion per year, approximately \$1,100 per household according to the national Habitattitude™ campaign (www.habitattitude.net).



Habitattitude™ encourages enjoyment of your water features and protection of natural waterways by offering responsible solutions to the disposal of dead, dying or unwanted aquatic plants and animals. If you are a successful water gardener, you know that plants can grow so abundantly that they take over your pond. When autumn arrives, freezing temperatures may turn water garden plants unsightly. Do not release these plants and animals into the environment where they may become aquatic invasive species.

Safe and proper disposal of plants and

animals that you've purchased at a garden center early in the summer and nurtured all summer can be emotionally difficult, but caution and careful thought are needed in deciding what to do with unwanted plants and animals. Releasing any aquatic organism into the environment is NOT an accepted practice and may even be punishable by law.

So what's a responsible water gardener to do? For starters, find out if a plant or animal is native to Michigan when deciding which to purchase. Never assume a plant or animal is harmless or benign. Disposal options include:

- Contact retailer for proper handling advice or for possible returns
- Give/trade with water gardener
- Donate to a local aquarium society, school, or aquatic business
- Seal aquatic plants in plastic bags and dispose in trash to be landfilled
- Contact veterinarian or pet retailer for guidance about humane disposal of animals

DO NOT RELEASE water garden animals and plants into the outdoor environment – even if they appear to be dead.



European frogbit is a popular water gardening plant that appears on Michigan's prohibited species list. Photo credit: Paige Filice, Michigan State University

Habitattitude™ also offers tips for thoughtful planning of your water feature to avoid stress, heartache and the spread of AIS. Before purchasing non-native plants and animals, know which aquatic species are prohibited and restricted according to Part 413 of Michigan's Natural Resources and Environmental Protection Act 451 of 1994. It is illegal to be in possession of, sell, offer to sell or introduce into the environment prohibited plants and animals and hefty fines may be incurred.

Michigan's prohibited plant list includes popular water garden and aquaria plants such as:

- European frogbit (*Hydrocharis morsus-ranae*)
- Fanwort (*Cabomba caroliniana*)
- Parrot's feather (*Myriophyllum aquaticum*)
- Yellow floating heart (*Nymphoides peltata*)
- Water chestnut (*Trapa natans*)

Although not yet on the Michigan list, two other popular water gardening plants appear on the federal list of prohibited aquatic species; Water hyacinth (*Eichhornia crassipes*) and Water lettuce (*Pistia stratiotes*). Avoid purchasing any of these invasive plants and take special care in handling and disposal. When shopping at a garden center or online, it is important to remember that common names of retail water garden and aquaria plants can be misleading. To avoid purchasing prohibited plants, be sure to check the scientific names.

For assistance in identifying invasive aquatic plants, a new Michigan State University Extension publication provides full-color photos and detailed descriptions of the seven species mentioned above plus four more species. This 28-page booklet, entitled *A Michigan Boater's Guide to Selected Invasive Aquatic Plants* (E3189) is printed on water resistant paper and may be purchased online at www.bookstore.msu.edu. Cost is \$10.00.

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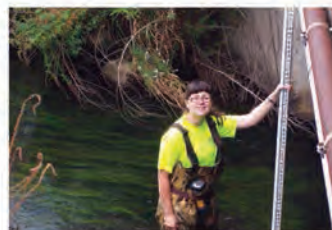
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what are... EASEMENTS?

Clifford H. Bloom
Bloom Sluggett Morgan, PC
Grand Rapids, Michigan 49503



An easement is a concept that arises frequently regarding waterfront properties. However, many issues relating to easements remain somewhat of a mystery to most riparian property owners.

An easement is the permanent right to use a portion of the property of another for a specific use or purpose. Easements are typically created (or reserved) by an express document, whether it be a deed, land contract, dedication in a plat, a deed restriction document, or a specific easement agreement. In order to be valid, “run with the land,” and bind and benefit future property owners, easements must be in writing and recorded with the county register of deeds. One exception to this rule is a prescriptive easement.

Real estate attorneys often refer to a landowner having various rights similar to a bundle of sticks. Where the landowner owns full and unencumbered title to a property, he or she owns the entire bundle. However, for example, if the oil and gas rights have been severed from the property (and are owned by someone other than the owner of the surface of the land), one “stick” in the “bundle” is gone. Similarly, if there is a recorded permanent easement in favor of someone else, then another “stick” in the “bundle” is missing. The larger number of property rights that are owned, leased or held by someone else, the fewer sticks in the bundle that are owned by the landowner and the greater the encumbrances on the land.

Most easements are rights of travel across the property of another. These can include easements for private roads, walkways, stairs, alleys, and similar items. In fact, most public road rights-of-way are glorified easements. Although most easements are for travel purposes, easements do exist for many other uses. Non-travel uses that can be authorized by an easement include parking, utilities, dockage and boat moorage, septic drain fields, drainage, wells, and storage. However, the common

land preservation device referred to as a “conservation easement” is actually a misnomer; a conservation easement is really a deed restriction or restrictive covenant (preventing development and certain other uses), not a true easement.

A prospective purchaser of a property should be aware that there may be both easements benefiting that property as well as burdening the property. Some of the easements that can benefit a particular property (often referred to as an easement “appurtenant,” which means that it benefits the property and is “attached to” that property¹) include private road and private utility easements across the adjoining or nearby properties of others. Easements that can potentially burden a property to be purchased (easements that are often for the benefit of other properties) also include private road easements, utility easements, walkway easements, drainage easements, and well or septic easements.

All other matters being equal, it is best not to purchase a property that has one or more easements running across (and binding) that property.² Why? Easements are encumbrances. Easements across a property can often “cloud title.” Having easements located on one’s property can cause the landowner to lose control of significant aspects of the property. That is particularly true of access or private road easements for other properties (and that do not benefit the property across which the easement is located) that can make a property owner whose land is subject to such an easement feel like he or she does not own a chunk of their own property.

Some easements are “dormant.” That is, they still legally exist, but have not been used or developed (or at least not for many years). Unfortunately, some purchasers of property bound by dormant easements assume that over a period of time, the easement will become invalid by abandonment or that the easement will never be utilized for the purpose for which it is granted.

Both assumptions can prove frustratingly wrong. Almost never can an easement be extinguished or lost by abandonment or mere nonuse. Likewise, an easement that has lain dormant for decades (or longer) can suddenly be developed by the beneficiary or beneficiaries of the easement for the purposes allowed. All of a sudden, that unused private road easement on your property that serves another parcel, an unused and undeveloped stairway easement across your land to the beach, or an unused drainage easement on your property may be improved and utilized. Quite often, an easement benefits not only one property but several or many adjoining or nearby properties.

For lakefront property owners, among the most frustrating easements can be easements in the form of plat dedications (or the equivalent) located between the shore and the lakefront property or along the edge of a lakefront property (going to the body of water) for use as a park, private or public road, alley, walkway, or beach for others.

Of course, some easements are really no big deal. For example, most properties have a utility easement located along the non-waterfront edge of the property. Every property that borders a public road right-of-way has a significant portion of the undeveloped unplatted portion of the road right-of-way extending 10, 20, 30, or even more feet into the property. Quite often, drainage easements on one’s land are not a problem (although in some case, they can be trouble).

Easements are items not to be trifled with.

1. Other easements do not benefit a particular property and are called “easements in gross” (for example, public road easements and public utility easements).

2. There are, of course, exceptions to this. Private road easements that also benefit the lot or parcel involved and utility easements that do not interfere with the property’s use are examples of generally acceptable easements on one’s land.

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



Michigan Lake & Stream Associations, Inc.
300 N. State St., Suite A
Stanton, MI 48888
Phone 989-831-5100

E-mail info@mlswa.org, sbrown@mlswa.org
Web sites www.MyMLSA.org, www.micorps.net
William Scott Brown, Executive Director

OFFICERS

PRESIDENT - Sondra (Sue) Vomish
52513 Twin Lakeshore Drive, Dowagiac, MI 49047
Phone 269-782-3319 E-mail vomish@comcast.net

VICE PRESIDENT - Richard Morey
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Phone 269-424-5863 E-mail rdm@sisterlakescable.com

SECRETARY - Nancy Beckwith
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TREASURER - Tom Murphy
24 Chateaux Du Lac, Fenton, MI 48430
Phone 810-750-0088 Email chateaux24@aol.com

REGIONAL REPRESENTATIVES

REGION 1 - Mark L. Teicher
6245 Wellesley Dr, West Bloomfield, MI 48322
Phone 248-851-4327 E-mail markteicher@aol.com

REGION 2 - William Scott Brown
11250 Riethmiller Rd, Grass Lake, MI 49240
Phone 517-914-1684 E-mail sbrown@mlswa.org

REGION 3 - Sondra (Sue) Vomish
52513 Twin Lakeshore Drive, Dowagiac, MI 49047
Phone 269-782-3319 E-mail vomish@comcast.net

REGION 4 - Jennifer Medema
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Phone 616-691-7057 E-mail mlswa.region4@gmail.com

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NEWSLETTER EDITOR - Sharon Wagner
300 N. State St., Ste A, Stanton, MI 48888
Phone 989-831-5100 E-mail swagner@mlswa.org



Jerry Donley Receives 2013 ML&SA "Riparian of the Year Award"

Mr. Jerry Donley of Indian Lake (Cass County) has received the Michigan Lake and Stream Associations' 2013 "Riparian of the Year" award. The award was presented to Mr. Donley on Friday, April 26, 2013 during the banquet held as part of the 52nd Annual Conference held this year in Bay City. The award is presented annually to an organization or individual whose lake or stream conservation and/or stewardship activities during the past year have best exemplified the mission and goals of ML&SA. Mr. Donley has devoted considerable time and energy to educating people about the importance of being a good steward to Michigan's treasure of inland lakes. The entire ML&SA family extends its appreciation to Jerry for his devotion to preserving and protecting our inland waters!



Volunteer Paul Kortier Receives "Spirit of ML&SA" Award

Michigan Lake and Stream Associations is pleased to announce that Mr. Paul Kortier of Lake Avalon in Montmorency County has received the first ever "Spirit of ML&SA" award. The award was bestowed during the banquet that was held on the evening of Friday, April 26th, 2013 as part of the 52nd Annual Conference. Paul, a retired Air National Guard Senior Master Sergeant, is the husband of ML&SA Board member Cecile Kortier and has been an active and enthusiastic supporter of the organization for well over twenty years. Paul has been directly involved in annual conference preparation and set-up since 1990.



Dick Morey, ML&SA Vice-President, Awarded Annual Master's Jacket

Michigan Lake and Stream Associations is pleased to announce that Vice President Dick Morey is the recipient of the 2013 Master's Jacket. The award was presented at the banquet held in conjunction with this year's annual conference on the evening of Friday, April 26 and is given as a tribute to a volunteer whose work on behalf of the organization during the past year has gone "above and beyond" the normal call of service.

Dick, a long-time resident of Magician Lake near Dowagiac, has served as the Vice President of ML&SA for the past four years and has made substantive contributions to the achievement of the overall mission and goals of the organization.

In addition, Dick has volunteered as the Magician Lake Cooperative Lakes Monitoring Program monitor for many years and regularly assists MiCorps staff and volunteers in maintaining the unique CLMP program.

ML&SA 52nd Annual Conference Highlights

By Scott Brown, Executive Director

The entire Michigan Lake and Stream Associations extended family sends a big Michigan thank you to our members, this year's presenters and our commercial and non-profit exhibitors for their enthusiastic support of our 52nd Annual Conference which was held on April 26 and 27 in Bay City this spring.

More than 230 folks made the trek to Bay City to contribute to the success of our perennial event. We kicked the conference off on Friday morning with a two-hour opening session focused on the status of Michigan's fisheries. A hearty thank you to Jim Francis of the Michigan Department of Natural Resources, Dr. Bryan Burroughs of the Michigan Chapters Trout Unlimited, and Steve Pothoven of the National Oceanic and Atmospheric Administration.

A Friday afternoon seminar took a hard look at one of the most contentious issues in our state right now – fracking. Over 140 people participated in what turned out to be a very interesting and at times “passionate” exchange of ideas regarding this not-so-new oil and gas drilling technique. Thanks

to Jim Peters of the Michigan Oil and Gas Association, Jim Armbruster of the Department of Environmental Quality and Kevin Heatley, restoration ecologist and anti-fracking activist, for making this an interesting and informative event.

Our energetic attendees helped ensure that each of our breakout sessions was well attended. Offered throughout our two-day conference were topics focused on working

effectively with your township, riparian rights, laminar aeration to control lake muck, rethinking your natural shoreline, nutrient management to optimize inland lake fish growth, stream bank rehabilitation and its impact on fish, and Diver Assisted Suction Harvesting.

Thanks to Catherine Mullhaupt, J.D. of the Michigan Township Associations, Dr. Josette La Hee of Vertex Water Features, Cliff Bloom of Bloom, Sluggett, Morgan, PC of Grand Rapids, Jennifer Jermalowicz-Jones of Restorative Lake Sciences, LLC, Gary Marzolf of Naturally D.A.S.H and Dredge (Diver Assisted Suction Harvesting), Patti Hoch-Melluish of Kieser and Associates, Bill Dimond of the Michigan Department of Environmental Quality, Dr. Jo Latimore of the Michigan State University Department of Fisheries and Wildlife, Dr. Paul Steen of the Huron River Watershed Council and Kip Cronk, Michigan Natural Shoreline Partnership volunteer, for the considerable time and effort in creating and presenting interesting and informative sessions!



Christal Lewandowski (Left) of Oakland County and Dr. Josette La Hee of Vertex Water Features, discuss laminar aeration at the ML&SA 52nd Annual Conference



ML&SA Vice-President Dick Morey (Left) and John Wilks, ML&SA Board member, compare notes at the 52nd Annual Conference banquet.



Dr. Paul Steen, MiCorps scientist (Left) and Bill Dimond, DEQ MiCorps manager, prepare for a presentation at the annual CLMP volunteer training event



Bre Grabill, environmental scientist of Professional Lake Management Northern Division, shares a moment with Art Robell, ML&SA Board member (emeritus)

An Open Letter to the Michigan State Waterways Commission and the Michigan Department of Natural Resources from Michigan Lake and Stream Associations

by Scott Brown, ML&SA Executive Director

Michigan Lake and Stream Associations, Inc. is a fifty two year old non-profit organization whose membership is comprised of hundreds of lake associations, corporations and individual members throughout the state who share a common goal and vested interest in preserving and protecting the ecological, recreational and economic value of our profound wealth of inland lakes and streams for future generations.

For over sixty years, our members, the conscientious men and women of lake associations throughout the state, have voluntarily placed themselves at the forefront of a never ending battle with a destructive array of aquatic invasive plants and animals. Through self-imposed special property tax assessments whose funds are specifically allocated to implementing long term plans to manage the aquatic invasive species that have entered their lakes primarily through public boating access sites, lake associations and their respective townships have placed themselves at the epicenter of efforts to preserve and protect the recreational and economic value of thousands of Michigan's inland lakes. The on-going efforts of our state's lake associations have ensured the preservation of viable recreational boating and fishing opportunities for the general public as well as the unique lakefront lifestyles and private businesses whose success is so dependent on healthy aquatic ecosystems and good water quality.

We are sad to note that after more than sixty years since the first introduction of aquatic invasive species into the inland waters of the State of Michigan, our state government has yet to enact legislation that would create an effective and sustainable aquatic invasive species management funding mechanism that would serve to redistribute a sizable, yet equitable, portion of the financial burden and responsibility for the cost of aquatic invasive species management to Michigan's

expansive public recreational boating and fishing communities as well as to every citizen who benefits from the presence of high quality inland waters.

Scientists, governmental regulators and aquatic resource managers throughout the state have acknowledged that the potential threat posed by the propagation of highly aggressive and rapidly colonizing aquatic invasive plants such as Hydrilla and Brazilian water weed, will require heretofore unachieved levels of public funding as well as intensive collaboration between state government and water resources stakeholders in order to effectively thwart and/or minimize extensive damage to our state's highly beneficial aquatic ecosystems.

Therefore, in light of these indisputable facts, Michigan Lake and Stream Associations hereby strongly suggests that the Michigan State Waterways Commission and the Michigan Department of Natural Resources place an immediate moratorium on the expansion, upgrade or new construction of public boat launch facilities until such time as the State of Michigan enacts legislation in order to provide for a viable and sustainable operational funding mechanism with which to support the management and control of aquatic invasive species within the inland waters of the State of Michigan.

For far too long, Michigan lake associations and/or lake communities throughout the state have been asked to singularly shoulder the burden of aquatic invasive species management and control while the recreational boating and fishing public as well as a diverse population of citizen stakeholders who continue to reap the benefits of navigable waters and good fishing have not been asked to contribute a fair and equitable amount with which to help support and sustain these collective efforts.

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ALPENA YOUTH Explore Impacts of Invasive Rusty Crayfish Within Their Local Watershed

Posted on May 28, 2013
by Brandon Schroeder,
Michigan State University
Extension and
Daniel Moffatt, Northeast
Michigan Great Lakes
Stewardship Initiative

Sanborn Elementary School students study crayfish to better understand biodiversity and ecosystem health within their Thunder Bay River Watershed.

Spending a sunny spring day on the river looking for crayfish among other aquatic life sounds like a fun day out of school – and indeed it is. Yet for Alpena Public School students of Sanborn Elementary this reflects a typical school day filled with hands-on and real-world learning experiences. Their hunt for crayfish is part of a broader study of the local Thunder Bay River where they monitor water quality and take on important stewardship projects to improve the Lake Huron watershed.

Overall, their research goal is to understand how invasive species affect the health of the watershed by disrupting the natural aquatic ecosystem and food web. These students are taking on a real-world issue, and are doing so in collaboration with community partnerships fostered through the Northeast Michigan Great Lakes Stewardship Initiative network, such as Michigan Sea Grant, US Fish & Wildlife Service (USFWS), Michigan Dept. of Natural Resources Fisheries, the NOAA Thunder Bay National Marine Sanctuary (TBNMS), and Michigan State University Extension-supported 4-H2O and NOAA BWET water education partnerships, among others. A great example of place-based stewardship education in action, these students are engaged, through their learning, in studying their local watershed and identifying important environmental stewardship issues (and possible solutions) of great importance to their coastal community.

On this particular mid-May day, their research aim is to track the invasion of a lesser-known invasive rusty crayfish. Third, fourth, and fifth grade students waded the waters at multiple study sites on the Thunder Bay River capturing and counting crayfish. Applying science study process and math, they are documenting the spread of

this invasive and looking for areas where native crayfish might remain. At each of these sites, they are discovering native crayfish to be extremely scarce (collecting only a few over the past couple of years), instead capturing invasive rusty crayfish in large numbers. Comparing their findings with a Michigan crayfish survey conducted by Michigan State University researchers in the 1970's, these students are discovering just how far the invasive crayfish have spread, displacing native crayfish species at their study sites located throughout the watershed in just the past 30 years.

These students have identified aquatic invasive species to be one the foremost threats to the health of their local watershed. Working alongside scientists, they study how invasive species have caused ecosystem changes drastically impacting Lake Huron's fishery along with a broader bi-national study implicating invasive species as a threat to biodiversity across the Lake Huron basin. Students have been observing invasive zebra and quagga mussels with local agency scientists, documenting zebra mussel densities in the river with USFWS. They also monitor quagga mussel infestations on shipwrecks in Lake Huron with NOAA TBNMS staff, by deploying underwater remotely operated vehicles (ROVs) that the students had built themselves to study the problem. Upon discovering rusty crayfish, their studies expanded to include this invasive known to displace native crayfish and alter aquatic habitat by destroying aquatic vegetation.

Contributing to their community, students are generating awareness and educating local residents about this important issue. They interact often with community members, meeting them on the water, visiting other classes, meeting with local legislators, and even through the many local news stories that cover the adventures of these students. Some of the rusty crayfish collected have been cast in acrylic blocks and are used now across the Great Lakes region as specimen examples to teach others about this important environmental issue. In support



(Continued on page 18)

ALPENA YOUTH

Explore Rusty Crayfish

(Continued from page 17)

of Michigan Sea Grant's education and outreach efforts, they are partnering in the distribution of aquatic invasive species educational materials, including the regional Stop Aquatic Hitchhikers™ campaign. They even identified the need and contributed much of the text for the newest Great Lakes Most Unwanted poster for the rusty crayfish.

A project like this brings learning to life, and this Thunder Bay River Watershed study reflects multidisciplinary learning at its best. These elementary students apply science, technology, engineering, and math (STEM), while designing their research project, building underwater ROVs, and applying math to analyze data collected. They explore history, social studies and English language arts when researching and writing about invasive species in the context of their local watershed. Students must apply artistic creativity in designing their displays and presentations, and gain invaluable life skills when out in the community—whether on the river with researchers or interacting with their community about the issue. In this community context, they practice problem solving, team-building, leadership, communication and community engagement.

In the end, this student project offers fun and memorable days for students on the river exploring their Thunder Bay River. In their community, these students are enhancing education, fostering awareness, and addressing this important issue of invasive species impacting our Great Lakes watersheds.



For more information about the Northeast Michigan Great Lakes Stewardship Initiative (NE MI GLSI), an initiative supported by the Great Lakes Fishery Trust, and place-based education programming partnerships with Sanborn Elementary School, visit the NE MI GLSI website and their Thunder Bay River Watershed Project page.

This article was published by Michigan State University Extension. For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).



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by

Clifford H. Bloom

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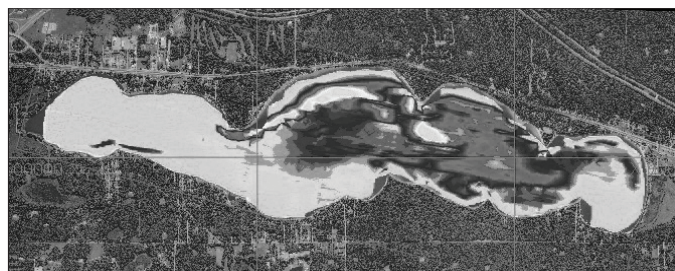


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Welcome to the SAVE the Blue Lake Island Movement

Editor's note: John D. Williams, Morton Township Tri-Lakes Association Board Member, sent us this article as a follow-up to his spring 2013 "Welcome to the SAVE the Blue Lake Island Movement". The Tri-Lakes, in Mecosta County, consists of Blue Lake, Lake Mecosta and Round Lake. www.thetrilakes.org

The State of Michigan has determined that they own the island [Blue Lake Island]. For quite a few years we have tried to get the State to either help us with the erosion problem or allow the Tri-Lakes Association to have a project to protect the island.

Over the years the DNR/DEQ has performed inspections of the island. They were amazed about the many types of plants and trees on the island. After each inspection of the island the comments were that they had to study the situation further before allowing anyone to begin a project. In 2012, the DEQ again visited the island and still had not reached a decision. It was evident at that time that the erosion was continuing at a faster pace than before.

The winter of 2012/2013 was very hard on the shoreline of the island. Between 15 and 20 feet of shoreline was lost in the northwest area where an old oak tree stands. The water has now reached underneath the oak

tree and it appears that all efforts to save it will not help. The erosion has also begun to split the island in half which will further hasten its demise and only a sand bar will be left. We still have not received permission from the DEQ to save it.

The DEQ, during their inspections of the island, were excited to see such a variety of plants and trees, but they have wasted so much time in reaching a determination on how to help the state-owned island that they now have lost it to the elements. Never will oak, birch and willow trees stand on this area again. The area will be lost for picnics and camping and only a party sand bar will exist.

Our Tri-Lakes and its citizens deserved better. We would appreciate any answer the DNR/DEQ has to offer as to why this has taken so long to act on our problem and why it's better to do nothing and lose a well treed island to a sand bar.



Blue Lake Island erosion



Oak tree on Blue Lake Island

My family has had a cottage on Blue Lake for over 62 years and the island that I remember and my children enjoyed will be lost for future generations to experience.

A Michigan Boater's Guide to Select Invasive Aquatic Plants

New MSU Extension Publication Provides Useful Guidance on AIS

Michigan State University Extension has recently published a handy and useful guide that offers assistance to recreational boaters in identifying aquatic invasive plants as well as in providing important information on how to contribute findings to the Midwest Invasive Species Information Network (MISIN). MISIN is a multi-state on-line inter-active resource designed to maintain current vital information regarding the potentially harmful terrestrial and aquatic invasive species that have been observed within the region.

With information regarding eleven aquatic invasive plants that currently pose a threat to or that may threaten Michigan's aquatic ecosystems if they should become established in Michigan waters, the twenty eight page guide includes full color photographs and has been printed on water repellent paper.

MSU Extension publication E3189, **A Michigan Boater's Guide to Selected Invasive Aquatic Plants**, is available through the [MSU Extension Bookstore](#). Cost is \$10 per copy with reduced prices for bulk orders.



LAKE HAPPENINGS

Send us your lake association newsletter or special announcements electronically. We love hearing from your lake. We will continue to use and spread the interesting and informative things happening on your lake in The Michigan Riparian. Please send your lake association newsletter to: swagner@mlswa.org.

Taps... at Gravel Lake

Gravel Lake Association -- P.O. Box 531, Lawton, MI 49065 -- www.gravellake.org

Volume XXIV Number 2 - Fall, 2012 Newsletter

By Donna DeRosa, Streeter Beach

You may have heard it...every evening at sunset, someone plays Taps. Many Gravel Lakers gather on their boats or listen from their decks as the tribute is flawlessly performed by Streeter Beach resident, Greg Garrett. Greg (retired Army) and his wife, Marianne (retired teacher), are originally from Joliet, Illinois. Greg spent all his childhood summers on Winkler Beach where he first began playing Taps at sunset with his coronet at age 10.

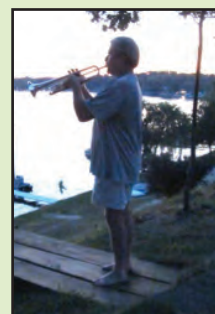
With a background in music, both vocal and instrumental, Greg spent 31 years stationed at Fort Myer, Virginia and was a member of the U.S. Army Chorus. Upon retirement his

fond memories brought him migrating back to Gravel Lake...a familiar story for many of us...and in 2007 he and his wife purchased a "fixer upper" on Streeter Beach that they have beautifully renovated.

Greg and Marianne currently divide their time between Gravel Lake and Star, Idaho (a suburb of Boise). Greg plays several other instruments but only recently began playing the trumpet. He says he was inspired to resume playing Taps at sunset every evening while practicing for the 100th Anniversary Concert of his Joliet high school. For that, we thank you Greg!



Note: Official sunset times can be found on www.sunrisesunset.com.



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An Update on the Michigan Aquatic Invasive Species Advisory Council

Council Ponders Sustainable AIS Program Funding Mechanisms

By Scott Brown
ML&SA Executive Director

The Michigan Aquatic Invasive Species Advisory Council was created by the state legislature in 2011 in order to provide recommendations to the Michigan Department of Environmental Quality regarding aquatic invasive species issues. The council consists of 19 members who represent the interests of regulated entities, citizen organizations, governmental agencies, academia, and citizen stakeholders.

The Council has been tasked with developing recommendations regarding an update of the aquatic invasive species state management plan, funding to implement the plan, prevention of the introduction and spread of aquatic invasive species, the state's certification of United States Environmental Protection Agency's Vessel General Permit (ballast water permit) as well as *Phragmites australis* control.

The most significant and challenging of the assigned objectives for the Council is to recommend potential funding sources that would allow the State of Michigan to adequately fund and administer a viable and sustainable aquatic invasive species (AIS) program. The Michigan Department of Environmental Quality administered program would serve to provide management and control, inspections and enforcement, state and regional program coordination efforts as well as education and public awareness campaigns aimed at thwarting the spread of aquatic invasive species within Michigan's waters.

Although the Council has yet to publicly reveal its AIS program funding recommendations, it is believed that they may be influenced by those established in neighboring Great Lakes states. In Wisconsin, for example, a small portion of the gas tax apportioned to boat usage is used to fund an approximately \$4,000,000 per year aquatic invasive species program. In Minnesota, a \$5 per boat additional registration fee, a portion of the fee from non-resident fishing licenses and \$725,000 from the state's general fund, provide approximately \$2,000,000 per year to fund aquatic invasive species programs. In Indiana, a Lake and River Enhancement Fund is supported by a fee levy on boat registrations that ranges from \$5 to \$25 per boat. The final aquatic invasive species program funding recommendations of the Council would have to be agreed upon and passed by the state legislature and signed by the Governor as part of a legislative package before becoming law.

Michigan Lake and Stream Associations wholeheartedly supports the efforts of the Council and strongly suggests that our state legislature passes into law a robust and sustainable aquatic invasive species program funding mechanism.

To learn more about the important work of the Michigan Aquatic Invasive Species Advisory Council, please visit their dedicated web site:

http://www.michigan.gov/deq/0,4561,7-135-3313_3677_8314-274740-,00.html

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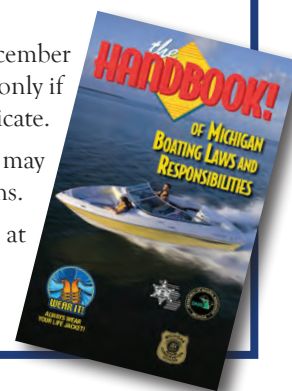
you are accompanied on board by your parent or legal guardian or by a person 21 years old or older who has been designated by your parent or legal guardian or—

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The Art and Science of Integrated Lake Management:

MAPLE LAKE, VAN BUREN COUNTY, MICHIGAN

By: Jennifer L. Jermalowicz-Jones | Water Resources Director, Restorative Lake Sciences, LLC

Maple Lake Overview:

Maple Lake is located in Sections 1,11,12,13, and 14 (T.3S, R.14W) of the Village of Paw Paw and Paw Paw Township in Van Buren County, Michigan (Figure 1). The lake surface area is approximately 192 acres (Michigan Department of Natural Resources, 2001) and the lake is classified as a eutrophic (nutrient-rich) riverine impoundment with a dam at the north end of the lake. Maple Lake has a maximum depth of 15.0 feet and an average depth of 7.0 feet (MDNR, 2005). The lake bottom consists primarily of sandy substrate, silt, and organic matter deposits. The lake perimeter is developed and is approximately 5.74 miles (MDNR, 2005). The hydraulic residence time is approximately seven days (Southwest Michigan Planning Commission, 1978), which is common for a riverine system. The short retention time is due to the shallow lake depth and fast inflow of water from the Paw Paw River. Furthermore, there is a fetch of 1.32 miles which results in sizeable waves during high north and south winds.



Figure 1.
Maple Lake, Van Buren County, Michigan.



Figure 2. Maple Lake, 2008

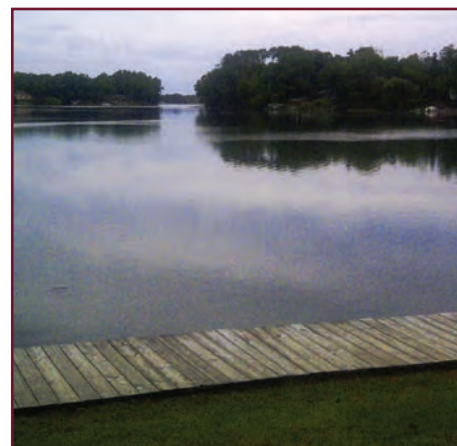


Figure 3. Maple Lake, 2012

Maple Lake currently utilizes multiple methods of lake improvement including inversion oxygenation (aeration) with bioaugmentation (the use of microbes and enzymes), aquatic herbicide treatments, mechanical harvesting, lake drawdown, Diver Assisted Suction Harvesting (DASH), watershed management, and shoreline Best Management Practices (BMP's). The village of Paw Paw, Maple Lake Association, Three Rivers Coalition, and lake experts work together each year for the betterment of Maple Lake. What was once a turbid riverine system of canopied aquatic vegetation and algae (Figure 2) has become an improved clear-state lake system (Figure 3) with controlled aquatic vegetation and algae growth and improved water quality.

The use of multiple lake improvement strategies (integrated management) executed in Maple Lake involves the combined use of chemical, mechanical, biophysical

(aeration), and watershed (spatial) methods for the management of nutrients, sediments, and nuisance aquatic vegetation and algae growth. Integrated management is becoming increasingly necessary for many lake systems since aquatic ecosystems are multi-dimensional and have different vegetation communities and watershed characteristics in both space and time.

Management Method #1: Watershed Management

The Maple Lake immediate watershed is approximately 362 times the size of the lake. The areas within the watershed determined to be the highest probability of sediment and nutrient contributions to the lake (Critical Source Areas) were delineated (Figure 4). Many of the impairments consisted of elevated total nitrogen, total phosphorus, and high dissolved solids, presence of easily ponded and erodible soils, and relative position in the landscape to drains and other watercourses. A total of seven CSA's with highest management priority were identified in 2012 through aerial imaging, ground-truthing, and sampling of drains that traversed problem areas and emptied into Maple Lake.



Figure 4. Location of CSA's around Maple Lake

(Continued on page 27)



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The Art and Science of Integrated Lake Management

(Continued from page 25)

After heavy rainfall, water enters the lake along with soils that are deposited as sediment in shallow areas. This deposition of sediments from the surrounding watershed into the lake has created multiple problems: 1) Silt deltas that interfere with navigation and alter riverine flow, 2) Transport of nutrient-rich sediments to various locations that result in increased submersed and emergent aquatic plant growth, 3) Increased turbidity of the lake water which has resulted in increased water temperatures near shore and declines in dissolved oxygen concentrations. Site-specific BMP's for each CSA were recommended and are being mitigated to reduce problematic sediment loads. Drains are being monitored with time to determine sediment and nutrient loading rates and to determine BMP efficacy

Management Method #2: Aquatic Vegetation Management

Over the past decade, most of the improvement focus on Maple Lake has been on aquatic vegetation management with the use of aquatic herbicides to treat invasive, exotic plants such as Eurasian Watermilfoil (*Myriophyllum spicatum*) and Curly-leaf Pondweed (*Potamogeton crispus*), and nuisance native aquatic vegetation which consists of multiple species. Dense filamentous algae have also been problematic, resulting in dense mats that formed canopies on the lake surface and the creation of strong odors. Previously, algaecides were used to address the algae problem which occurred multiple times per year. The use of mechanical harvesting has been used to remove dense colonies of Coontail (*Ceratophyllum demersum*) that exploits the high water column nutrients for growth. Removal of the Coontail through harvesting prevents excessive plant decay that leads to accumulation of muck on the lake bottom. In areas where submersed vegetation has created deltas, the use of Diver Assisted Suction Harvesting (DASH) is being pursued since harvesters cannot operate in very shallow areas. Lastly, exotic emergent aquatic vegetation is being removed and replaced with native natural shoreline aquatic vegetation that reduces

erosion and protects the biodiversity of the Maple Lake ecosystem.

Management Method #3: Inversion Oxygenation (Aeration)

In 2010, an inversion oxygenation (destratification) aeration system was installed into the south and mid-sections of the lake to create more uniform water movement in previously stagnant areas. Additionally, microbes and enzymes were added to the lake bottom to reduce organic sediments and result in greater water depths and less sediment nutrients for aquatic vegetation growth. Multiple water quality parameters such as dissolved oxygen, water temperature, conductivity, water column phosphorus and nitrogen, pH, water transparency, oxidative reduction potential, total dissolved solids, aquatic vegetation relative abundance, algae composition and abundance, sediment phosphorus, and organic matter and percentage of fines were measured in the aeration and control zones of the lake. The aeration system has been evaluated over the past few years and has shown modest increases in dissolved oxygen, reduced filamentous and planktonic algae growth and reduced submersed aquatic vegetation growth. In particular, Eurasian Watermilfoil and Curly-leaf Pondweed were significantly reduced throughout the aerated regions of the lake.

Management Method #4: Lake Drawdown

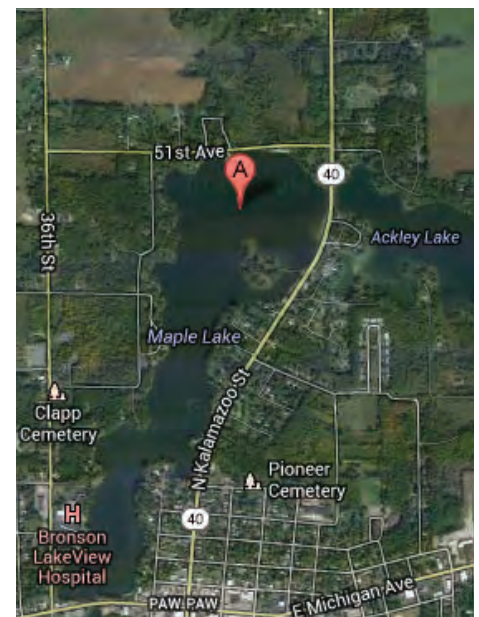
The lowering of lake levels has been used in the past to control the growth of nuisance aquatic plant tubers such as Hydrilla and several other native aquatic plant species including pondweeds (Cooke, 2007; Doyle and Smart 2001), and is a cost-effective strategy for large, shallow lakes that possess a water level control structure (i.e. a dam). The drawdown process requires a Part 301 permit from the Michigan Department of Environmental Quality (MDEQ) who works closely with the Michigan Department of Natural Resources (MDNR) Fisheries and Wildlife Division to assure that impacts to wildlife from lowering water levels will be minimal. Maple Lake has historically

conducted lake drawdowns to minimize damages from ice on near shore structures during winter and also excessive aquatic vegetation growth. To determine if the lake drawdown has any negative impacts on the biota of both Maple Lake and Ackley Lake (the receiving water body), sediment macroinvertebrates, aquatic vegetation communities, and fishery spawning habitat are being evaluated over an annual lake drawdown cycle. This evaluation will assist both the State and local stakeholders with future drawdown recommendations.



Current Conclusions:

The efficacy of all lake improvement methods must be determined for the best long-term management outcomes. Use of integrated approaches such as those described above allow for the lake ecosystem to be managed at the "site" level. Much spatial heterogeneity exists around lake shorelines, in lake sediments, within immediate watersheds, and within and among aquatic vegetation communities. Such spatial differences require precise management methods that most efficiently address problematic lake issues. An integrated program such as this involves the commitment of multiple stakeholder groups, thorough and novel site-specific research, development of unique BMP's, and the analysis of long-term data sets that singular future decision-making for optimum improvements.



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ANOTHER COURT CASE THAT RESTRICTS LAKE ACCESS

By: Clifford H. Bloom, Esq.
Bloom Sluggett Morgan, PC | Grand Rapids, Michigan

On May 23, 2013, the Michigan Court of Appeals issued an interesting unpublished decision in *Studley v. Township of Hill, et al.* (Case No. 303845; 2013 WL 2278075). The case involved the Plat of Shady Shores Park in Ogemaw County. The plat was created in 1928. Between two lakefront lots in the plat is an area label “beachway,” which is about 16 feet wide.

A dispute arose regarding how backlot property owners were using the beachway. The owners of the riparian lot adjoining the beachway filed a lawsuit in the Ogemaw County Circuit Court, seeking two forms of relief. First, they asked that the Court vacate (i.e., extinguish) the beachway altogether. Second and alternatively, the riparians asked the Court to determine the proper scope of usage rights by the backlot owners as to the beachway.

The trial court refused to vacate the beachway. However, the trial court also held that the beachway can be used for travel purposes only. The court prohibited the beachway from being used for any dock or overnight boat mooring or storage. The trial court also held that the beachway could not be used for sunbathing, picnicking or parking. Even though the backlot property owners

produced a newspaper advertisement from the time that the plat was created promoting boating and swimming, the court held that it was too vague and indefinite to prove that such activities were permitted at the beachway.

On appeal, the Michigan Court of Appeals upheld the decisions of the trial court. Of particular interest, the Court of Appeals agreed that beachway could only be used for ingress and egress (i.e., a right of passage) and not for private dockage, overnight boat moorage, lounging, sunbathing, picnicking or parking. The trial court did allow one dock, but for “day use” only (i.e., no overnight boat mooring or docking). The Court of Appeals held that the principles are the same, regardless of whether a dedicated way is public or private. In essence, the public road cases of *Jacobs v. Lyon Township*, 199 Mich App 667 (1993) and *Higgins Lake Property Owners Association v. Gerrish Township*, 255 Mich App 83 (2003) also apply to the beachway and other private road-type lake access devices. The Court of Appeals confirmed that backlot owners have “the burden of proving the grantor’s intent to provide an easement for more than mere access to the water.”



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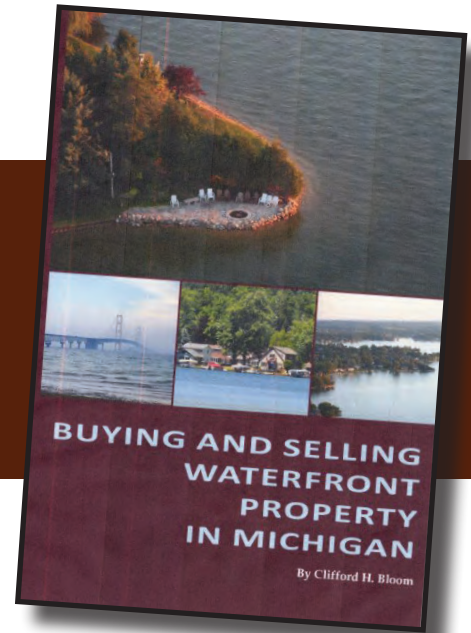
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The Michigan Lake & Stream Associations, Inc. ("ML&SA") is pleased to announce its new book entitled *Buying and Selling Waterfront Property in Michigan* by Grand Rapids Attorney Clifford H. Bloom. This is the second book from ML&SA, the first being the 2009 book called *Michigan Lake Associations—The Nuts and Bolts* (also authored by Cliff Bloom).

This new book is a "must" for anyone who is interested in waterfront property in Michigan. The list of people who should purchase the book includes not only riparians (and would be riparians) but also realtors and real estate agents, attorneys, government officials, surveyors and teachers. This book is a "how to" publication that deals with numerous real estate and waterfront issues, including:

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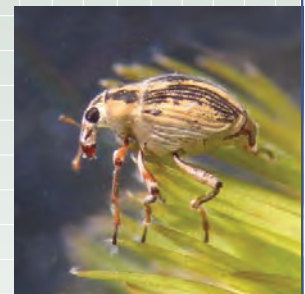
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