

# THE LAKER

NORTH LAKE PROTECTION ASSOCIATION

JULY 2015

NLPA MISSION: *To protect the ecological, recreational and esthetic well-being of North Lake.*

**NLPA ANNUAL MEETING**  
August 4, 2015, 7:00 pm  
Inverness Country Club  
13900 North Territorial  
**EVERYONE WELCOME!**

## ASSESSMENTS CUT FOR 2015

### 50% Reduction!

Washtenaw County reduced the North Lake Special Assessment District (SAD) rates by fifty percent in the Winter Tax bill that was due at the beginning of 2015. This was due to savings realized in the weed control program and associated costs. The county is limited by law on how much excess funds it can carryover from one term to the next. The SAD collects about \$50,000 per year in assessments, and in 2014 the costs were about \$38,000. The fund also had a carryover from previous years making the reduction possible. It is possible additional reductions may occur, depending on how extensive the weed problems are in future years.

The savings were \$110 for lakefront properties, \$70 for normal lake access parcels and \$35 for North Lake Farms properties. Thank you to the North Lake volunteers who help hold down costs by their contribution of time and expertise.

#### AGENDA:

1. Review 2014 Minutes
2. Treasurer's Report
3. Old Business
  - a. Update on SAD
  - b. Status of Weed Control
4. New Business
  - a. Lily Pad Treatment
  - b. Water Quality Testing
  - c. Burt Shurley Camp Status  
(Related Article on Pg 5)
5. Election of Officers

### NLPA ANNUAL DUES

*Please support your NLPA by sending your \$10 dues. We have continuing expenses for studies, mailings, state and federal fees, and other items. Please make checks out to NLPA and send to Dick Frendt in the enclosed envelope. If you're new to the lake or your email addressed has changed, please include your email address with your dues. We will keep it confidential and only use it for important lake notices.*

### MUTE SWAN MATES

The Mute Swan is reported to mate for life. However, changing of mates does occur infrequently, and swans will remate if their partner dies. If a male loses his mate and pairs with a young female, she joins him on his territory. If he mates with an older female, they go to hers. If a female loses her mate, she remates quickly and usually chooses a younger male.

*Source: The Cornell Lab on Ornithology*

## WATERFRONT WISDOM

The enclosed *Waterfront Wisdom* brochure is a resource the Huron River Watershed Council uses to promote healthy lakes and streams in the HRWC district. It contains tips for waterfront and lake watershed property owners. The NLPA purchased copies for distribution to our members. The funds which make this possible come from our annual dues. The cost was 50¢ per brochure, plus mailing costs. We combined it with the Laker mailing to minimize the overall cost.

## ALGAE BLOOMS ARE A SIGNIFICANT THREAT

A seminar was held at MSU in December, 2014, titled "*Nutrient Loading and Harmful Algal Blooms in Lake Erie and Inland Lakes: Concerns for Water Supplies.*" Dr. Jeff Reutter, Director of the Ohio Sea Grant Program at Ohio State University, presented information regarding algal blooms in Lake Erie and in inland lakes. The Toledo water system was shut down last year due to toxic algae that was sucked into its intake system. Dr. Reutter stated the primary cause of the bloom in the western basin of Lake Erie was the Maumee River discharge into the lake. It contains high levels of phosphorus from farming operations in the watershed.

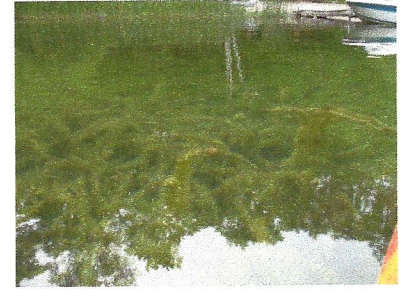
North Lake does not receive much phosphorus from fertilizers since Michigan prohibits phosphorus in lawn fertilizers. We are at risk for algal blooms, however, from sudden die-off of lake plants that have absorbed phosphorus and nitrogen which are then released into the lake. Some forms of algae are extremely toxic. Dr. Reutter noted that forty dogs died in Ohio last year due to this poisoning in its lakes. The plant we are most concerned with (in respect to algae blooms) is Curly Leaf Pondweed, which is part of our treatment program.

## NORTH LAKE PLANTS YOU SHOULD KNOW



### WILD CELERY

We have this plant in North Lake, but so far it is not a major problem, unless you are on the receiving end of a lake breeze that deposits a floating mass such as that shown above. There is not an effective treatment for this plant at this time. Hopefully, it will not become a major problem.



### EURASIAN MILFOIL

This was the invasive plant the NLPA first took action to control. Since 1989 we have been battling this intrusive and prolific nuisance. Each spring, in May or early June, we encounter patches, sometimes massive, of this submersed plant in mats that often reach the surface of the lake. After treatment, it usually dies off and becomes more or less dormant until the following spring. We occasionally have to follow up the spring application with spot treatment to prevent new growth from becoming a major problem.



Nymphaea



Spatterdock

### NATIVE WATER LILIES

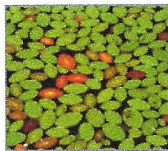
These attractive plants provide habitat for fish and add to the natural beauty of our lake. *Nymphaea* have large rounded leaves. *Spatterdock* leaves are also large leaves but they are somewhat pointed. The DEQ does not allow these plants to be treated except to provide boat access to the lake or a 40'x40' swimming area next to the shore. (See page 3)



### STARRY STONEWART

This looks like a plant but is actually an algae. It can grow in thick mats up to several feet deep. It chokes out other plants, and this can be a good thing when it's choking out Milfoil or Curly Leaf Pondweed, but a very bad thing when it chokes out native plants and covers natural areas needed by fish for spawning. If you swim at the sand bar you have encountered wads of this stuff floating near the bottom. This weed is usually treated at the same time the milfoil is treated but a different agent is used that is much lower in cost.

*Chara* looks similar to the photo on the right and is also an algae (but mostly beneficial) that grows profusely at the lake bottom. It looks moss-like and grows one to two feet tall. It stabilizes bottom sediments, is food for waterfowl, and provides cover for fish.



### WATERSHIELD

Water Shield is a lily pad type of plant but the leaves are much smaller and have a distinctive gelatinous slime on the underside of the leaves. It is native to Michigan and has been spreading rapidly on the west end of North Lake the past few years. It grows in water from 2' to 6' in depth. It is difficult to control because the gelatinous coating prevents herbicides from being absorbed. No treatment is currently applied to Water Shield in North Lake.



### CURLY LEAF PONDWEED

This invasive weed is a more recent problem in North Lake. It tolerates cold water more than other plants and gets a head start in the spring, crowding out other plants. By mid July it dies off after its 'turions' have fallen to the bottom to spawn new growth. New plants start to grow in the late fall and stay alive during the winter under the ice ready to flourish in the spring. The summer die-off releases nitrogen and phosphorus which they have absorbed and can potentially cause thick mats of filamentous algae to form, a very unpleasant condition. *Broad Leaf Pondweed* is similar to the Curly Leaf variety in plant structure, but has broad, tree-like leaves.

## LAKE LEVEL LOG

From the chart to the right, you will find the lake level in 2014 was the highest of the past three years, and 2012 was the lowest. Each spring the water level was higher than the top of the culvert weir at the west end of the lake. The water level quickly recedes as it spills over the weir until it is level with the top, and then gradually recedes due to evaporation, lawn watering and other losses. In mid-summer, we often experience  $\frac{1}{4}$  inch loss a day. In 2014 we ended the season (Oct 1) about 5 inches below the top of the weir. In 2013, it was 9 inches and in 2012 it was 12 inches below.

We started this season similar to previous years, but heavy rains in June raised the level to 5 inches above the weir - the highest level we have recorded since we began tracking the lake levels in 2012.

## WEBSITE UPDATE

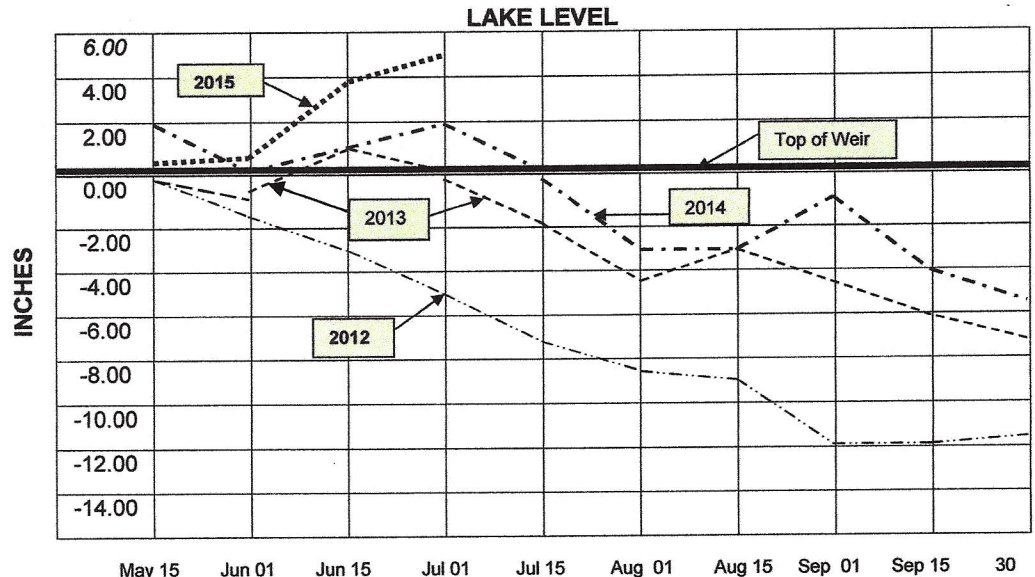
Do you want to learn more about our lake, read the latest news, or browse old editions of *The Laker*? It's all on the website at [Northlaker.org](http://Northlaker.org). You can check the lake treatment schedule by clicking the *Aquatic Services, Inc.* link. Our application contractor updates the schedule often, as dates change due to weather and other conditions. If you have news or photos you would like to share, contact our webmaster Mary Lou Frendt or email them to [nlpaemails@gmail.com](mailto:nlpaemails@gmail.com).

## LILY PADS RESTRICTING YOUR BOAT ACCESS TO THE LAKE?

For the last two years, we treated Lily Pad problems at requested docks. Under our DEQ permit we can treat a 20 foot wide access from your dock to the open water in the lake. This is done on a case by case basis. *If you want an access cleared to your dock, you must send a written request, along with a photo of your dock with home/access in the background for identification purposes.* We want to treat your dock area, not your neighbor's. Send your Lily Pad request, by **August 4**, to:

Richard Frendt, President NLPA  
7837 Stonehenge Valley Dr.  
Gregory, MI 48137

**If you had your dock area treated in 2014, do not send a request this year.** We will continue to treat your dock area assuming problems persist and the treatment is determined to be effective.



## INDIANS OF WASHTENAW COUNTY

In 1640, LaSalle traveled down the Huron River with four Indians. He was probably the first white person to be in this area. At that time, Michigan was occupied primarily by the Miami. They were part of a large language group known as the Algonquin. The Algonquin stretched from Newfoundland and New England, through central Canada, to the Sioux, who lived from this area westward. The Miami, Ottawa, Chippewa (Ojibwa), and Potawatomi were all tribes within the Algonquin group, as well as numerous other tribes, each who had their own dialect.

The Iroquois were another language group, nearly cutting the Algonquin in two, occupying New York, the north shore of the upper St. Lawrence River, the north shores of lakes Ontario and Erie and also the south side of Lake Erie. The Hurons, who later became known as the Wyandottes, were part of the Iroquois language group. Iroquoian territory extended into Michigan, from the foot of Lake Huron, west nearly to Lansing, where it turned south into northern Indiana and then curved abruptly westward. Washtenaw County lies entirely within this field. The Algonquin and Iroquois could not understand each other's language, but sign language was nearly universal among all tribes and language groups.

Five of the most powerful Iroquois tribes of New York (Mohawk, Oneida, Onadaga, Cayuga, and Seneca) formed an alliance, in part, for protection but mostly for aggressive warfare. Afterwards, the five took into their federation a sixth tribe, the Tuscarora. This federation is referred to as the Five Nations or the Six Nations, according to the time to which the reference is made. They were probably the most cunning, shrewd and best organized of any Indian powers in the east half of North America. They procured firearms from the Dutch and English traders before the tribes to the west of them. This, together with their craftiness in warfare, gave them an advantage against which no other tribe or union of tribes could successfully contend. They virtually exterminated the Eries, sometimes called the Cat tribe, who were also Iroquois, living along the south shore of Lake Erie. They carried terror as far west as the Mississippi River. They drove all other Iroquois out of Canada as well as most of the Algonquian tribes. The Hurons and the Neutrals, strong Iroquoian tribes though they were, could not resist the Six Nations and while fleeing from them out of their Canadian habitat were obliged to fight their way into Michigan. The Federation, upon its forays against the Miami and Illinois tribes, no doubt, at times trod the soil of Washtenaw County.

The Miami were a very numerous and quite widely distributed Algonquian tribe. They occupied the valleys of the Maumee, Wabash, St. Joseph and Raisin rivers, and probably that of the Huron at one time. They had been overrun by the Six Nations and were not able to resist the encroachment of the Potawatomi, who forced them out of Michigan.

The Potawatomi displaced the Miami and held sway through Washtenaw County, but not without the presence here at the same time of fragments of other tribes. The Potawatomi, who at their numerical maximum probably never numbered as many as \*three thousand individuals, were Algonquin. They appear to have wandered over territory extending from Green Bay, Wisconsin, across southern Michigan to Lake Erie, and for a time occupied Miami territory upon the Wabash in Indiana.

The Ottawa came from Canada east of Lake Huron. They were obliged by the relentless pursuit of

(con't. pg. 4, right col.)



**Longhouses** were used by the Iroquois tribes and some Algonquian neighbors. They were built with pole frames and elm bark covering. They could be 200 feet long, 20 feet wide and 20 feet high. Inside the longhouse, raised platforms created a second story, which was used for sleeping space. Mats and wood screens divided the longhouse into separate rooms. Each longhouse housed an entire clan-- as many as 60 people! Longhouses were not always used; small, individual family domes constructed of the same materials were often used.



Algonquian Shelter

## LAKE MONITORING

In 2014, NLPA joined the Cooperative Lakes Monitoring Program (CLMP) in Michigan. Volunteers take test samples and readings of several parameters over the spring and summer to track the quality of North Lake.

Lakes are classified either as eutrophic (nutrient rich and usually cloudy or with green algae), oligotrophic (nutrient poor, clear with few plants) or mesotrophic (between the other two). Mesotrophic lakes support macro-invertebrates such as dragonflies, beetles and mayflies as well as broad plant life.

North lake is rated "...between oligotrophic and mesotrophic, leaning slightly more toward meso than oligo." This is a pretty good place to be. The CLMP report also states the lake is quite a bit clearer than it was in the 1970's through the 1990's. Go to our website at [northlaker.org](http://northlaker.org) for the complete report.

Charlie Taylor leads the CLMP effort for North Lake. Thanks to him and his team for their important contribution to this monitoring program.

the Six Nations to flee, probably about the same time that the Hurons came to the west side of Lake Huron. They were Algonquian and closely allied with the Chippewa and Potawatomi and had friendly relations, from necessity, with the refugee Wyandots or Hurons. The great Pontiac was an Ottawa chief. His village was upon Peche Island in Lake St. Clair. The Ottawa were very aggressive and feared as long as Pontiac was the organizer and leader. He led war bands against the several English posts in the Northwest Territory. Pontiac had a nephew, Okemos, a respectable Indian to begin with and a renegade to end with, who visited Ann Arbor in the early days, followed by a reckless band of dissolute Indians and half-breeds. The Ottawa were "signers" of twenty-four treaties with the general government between 1785 and 1867, inclusive. Pontiac often attended councils in longhouses such as the one depicted in the left column. Some were large enough to hold 1000 Indians at important council meetings.

Chippewa or Ojibway were one of the great Algonquian tribes who always had to be reckoned with after they became known to the Whites, which was as early as 1640. Their original home, was north and northeast of Lake Superior. The Chippewa were a party to every treaty in which Michigan lands were involved, except the one with the Six Nations at Fort Stanwix in 1784, and that treaty only defined the limits of lands over which those Indians might think they held sway.

Indian boundary lines were very indefinite among themselves and overlapped. That is why every group who might claim rights was "asked in" to be parties to settlements. Indians did not understand the concept of land ownership and in early treaties believed they were just giving others the right to use the land. Treaties were mostly for the "extinguishing of titles" and some of the extinguishing processes had to be repeated a number of times on the part of the United States. The treaty of Detroit, 1807, was the fourth purchase that was made of the counties of Monroe, Lenawee, Wayne, Washtenaw, Macomb, Oakland, Livingston, St. Clair, Lapeer, and Genesee and portions of Jackson, Ingham, Shiawassee, Tuscola and Sanilac. This bargain eliminated the Chippewa, Ottawa, Potawatomi and Wyandot as claimants to the area involved, and, while they ceded their lands unconditionally, they were unwilling to relinquish possession. Washtenaw County was, at this period, a common hunting ground for these four tribes. The Chippewa at one time or another undoubtedly had villages and hunted in every county of the state. They have ranged more than 1,000 miles from east to west and are estimated to have numbered about \*25,000 in 1764. They were expert canoe men and frequented the streams and lakes. Between 1785 and 1867 inclusive, these Indians were parties to forty-seven different treaties with the United States.

The Huron (Wyandot) were pushed out of Canada but became people of importance in eastern Michigan and Ohio, being parties to nineteen treaties, the first in 1785, the last in 1867. There was a Wyandot village and cemetery at Ypsilanti. What other lodges they had in the county is unknown, but no doubt there were several sites which cannot now be located. The city of Wyandot on the Detroit River and Brownstown, in Wayne County, were their main villages. The Huron moved from their Detroit location to Sandusky Bay, on Lake Erie and became friendly with English traders who located there. Pontiac (Ottawa) and other tribes in the Detroit area were allied with French at Fort Ponchartrain and, with help from the Chippewa and Potawatamie, forced the Hurons to burn their village at Sandusky Bay and demanded they return to Detroit. The Huron agreed, but later slipped away and relocated with the Miami in southern Ohio.

There was an Algonquian tribe called the Sauk or Sack. The Sauk were numerous on the west side of Lake Michigan in Wisconsin, but a large band of them at one time lived around the head of Saginaw Bay and upon the Saginaw River and its tributaries. The Potawatomi, Ottawa and Chippewa were unfriendly to the Sauk. The Huron also meddled in the quarrel among these four Algonquian tribes. The Chippewa, Potawatomi and Ottawa formed a loose confederacy called The Three Fires, for their mutual advantage. The name of the bay, river and county in which the Sauk lived took the name Sauk-i-naw from them. The Sauk were much reduced by warfare with their enemies and were obliged to leave the district. Many of them escaped to the southern part of the state. The Old Indian trail from Detroit to Chicago was known as the Sauk trail. This trail was originally an animal trail (including mastodons) and is thought to have been a dividing line between woods to the north and grasslands to the south. When Michigan became a territory, it was made into a military road by the United States government and much of it is now U.S. 12 in Michigan.

In the southwestern part of the county there were two trails following up the River Raisin to Manchester. The trail upon the west bank was used by the Sauk, the east by the Potawatomi. These trails appear to have united at Manchester and led on into Jackson County. Other trails include several that converged at Saline. The salt springs by the Saline River just below the town of Saline, were known to the Indians. There were a village and an Indian cemetery there. Six trails met at that point. In those days the Saline River was navigable for canoes. This fact and the meeting of so many trails indicate that Saline was one of the important Indian centers of the county. The Dexter Trail was an Indian trail as was Dexter Road from Ann Arbor. Rivers and streams were also important for transportation (this was prior to the area being drained by about five and one half feet to make it suitable for farming).

The name Washtenaw is derived from Wastenong, the Indian name for the Grand River. Several

*(con't. pg. 5, right col.)*

## BURT SHURLEY CAMP

The Detroit Public School (DPS) system has been under financial stress for some time. Recently, Gov. Snyder appointed a new Emergency Manager to deal with the legacy debt issues. It is impossible to predict the steps that may be taken to overcome the debt, but at least one organization is concerned that the camp may be sold to raise funds. The Legacy Land Conservancy (LLC), a S.E. Michigan non-profit, has been in discussions with the DPS to purchase the development rights of the camp. This would prevent private development of the property.

**Meghan Prindle of LLC, will attend the NLPA Annual Meeting (see page 1), and will outline the current situation and answer questions of our members. Please plan to attend and be informed on this issue.**

The DPS is moving forward with plans to expand the use of the camp. Detroit Rescue Mission Ministries (DRMM) has contracted with the DPS to operate the camp for the next five years.

It is operated with about \$500,000 in federal Title I funds. DRMM is a Detroit faith based organization that provides emergency housing, drug abuse treatment and other services. They were selected due to their experience in running other camps. They will not have any religious programming at the camp.

DRMM is planning to broaden the use of the camp and improve the facilities. They have a fund raising program underway to raise a total of about \$5 million to improve the cabins and the lodge, provide new bathhouses, and add recreational facilities such as a rock climbing wall and possibly a rope course. They would like to make the camp a year-round facility by using it for retreats in the non-summer months.

*Portions of the above are excerpted or paraphrased from a Detroit Free Press article by Ann Zaniewski of May 6, 2015: DPS Summer Camp To Get New Operator. Upgrades.*

## FIREWORKS BY DAVE

Dave Steinbach presented another great fireworks show this 4<sup>th</sup> of July. Many new and amazing rockets filled the dark sky with wonderment for kids and adults of all ages. Considering that even Chicago no longer offers fireworks, our own North lake spectacular is even more impressive! Not many lakes enjoy the splendor we see every year.

Huge kudos and thanks to Dave and his helpers who pull this off each year. It's a shame such a small percentage of North Lakers contribute to this lake asset. **Thank You** to those who do!

legends tell the source of this name and one interesting legend says it was named after an Indian brave who came to the area from the east. His father was a chief and named Washtenong after the Great White Chief, Washington. The early pioneers sang a very popular song about the Washtenong:

*On emerald bank of woodland bowers  
Bespangled with bright roseate flowers  
Begirts this beauteous forest stream  
That glides afar like fairy dream.  
Where wild birds with their vocal song  
Chant praise to thee, fair Washtenong  
Here does the wild deer feed and lave  
His graceful limbs beneath thy wave  
In stately form and conscious pride  
The wild fowls o'er thy billows glide.  
While Whippoor-wills sing pensive song  
Mid thy fair groves, fair Washtenong.  
Here bark canoes that once did rest  
Upon thy bosom's placid breast  
Have floated down time's trackless shore;  
A name they've left and nothing more.  
Methinks the Indian Maiden's song  
Laments for thee, fair Washtenong.  
Here wandered red men, free as air,  
O'er hill and valley everywhere.  
But plowman now turns sacred sod  
Where forest kings have ever trod,  
Whose last sad echoing is a song  
Recalling love for Washtenong.  
Thou beauteous stream, thou's all aglow  
So freely do thy waters flow;  
Now, winding through high towers steep  
By fertile vale thy murmurs sweep.  
There sing thee on thy gentle song;  
We love it well, fair Washtenong.*

The above article is primarily excerpts and paraphrases from a book titled "The Indians of Washtenaw County, Michigan" by W.B. Hinsdale, 1927, U of M Library, 2005. Also referenced is "Wilderness Empire" by Allan W. Eckert, 2001, and several internet sites.

\* Recent evidence confirms that Indians were far more numerous in the Americas than previously thought and likely more numerous than this 1927 article states.

## THE LAKER - WEED TREATMENT REPORT 2015

**Paul Lammers and Dave Pruess**

This has been a different year for North Lake with very cold temperatures and very heavy amounts of rain. On May 28, a weed inspection of North Lake was conducted with interesting observations being noted. At that date, some lighter than normal weed growth was observed. The curly leaf and large leaf pondweed were predominating with light milfoil growth being observed. From this information, a small area treatment was scheduled for June 2, 2015, for the West and part of the East ends of North Lake. We will be monitoring the other normal weedy areas in the lake for more growth and it will be treated as needed. Doug Pullman, Jeff Knox and Jeff Krcmarek noted that North Lake was one of the better responding lakes in this area to weed treatment and thus better water quality. This is probably due to lake chemistry, correct chemical application, and the current plant hybridization stage when treated. There are other lakes in this area which did NOT respond so well to very similar treatment and care. The official Washtenaw County website for lake treatment can be accessed through our [Northlaker.org](http://Northlaker.org) website and clicking on the *North Lake Improvement Project* link.

During the rest of the summer, we may expect to see Eurasian Milfoil and Starry Stonewort growth that will require significant treatment. We may see some large leaf pond weed growth too but it should be dying in July. There will be scheduled inspections looking for weed growth but if you see significant weed growth, please contact either Paul or Dave

Dick & Mary Lou Frendt spent significant time developing a "North Lake Plants You Should Know" page that is very informative to lake users. This is included for your information. Thanks Frendts!

From the above, it should be evident that the actual weed treatment of North Lake is an ever changing issue that must be addressed by a wide spectrum professional management approach. With the increasing number and quantity of weeds in our lake along with these weeds' mutation abilities, knowledgeable and professional advisement is essential, especially considering the restrictions placed upon us by the DEQ. By having a professional advisor (as we now have with Aquest Corporation - G. Douglass Pullman- as part of our SAD) present for all official lake inspections and consultations on the lake conditions, we should have success with our charge of keeping North Lake useable for all residents.

### NORTH LAKE QUIZ

- How many acres is North Lake ?  
a. 140 b. 320 c. 227 d. 275
- What is the depth at the deepest point in North Lake?  
a. 32ft. b. 81ft. c. 51ft. d. 58ft.
- How many lakes (over 5 acres) are there in Washtenaw County?  
a. 115 b. 23 c. 59 d. 47

(con't. pg.6, right col.)

## Quiz Answers

1. C (227)
2. D (58 ft)
3. A (115)
4. A (3) Ford Lake 975 Acres,  
Four Mile Lake 256 Acres,  
Geddes Lake 261 Acres  
Note: Big Portage Lake and  
Whitmore Lake are both  
larger, but are not entirely in  
Washtenaw County.
5. B (3) Blind Lake 70 ft, Half  
Moon Lake 70 ft, South Lake  
88ft.

Note: Lake sizes & depths based  
on DNR maps.

## NLPA BOARD

**President** Dick Frenndt  
**Vice Pres.** Charlie Taylor  
**Sec/Treas.** Sheryl Ulin  
**Website Mgr.** Mary Lou Frenndt

### Landing Representatives:

**Gilbert Drives**  
No Active Representative  
**Glen Oakes**  
Dan Kruse  
**Hadley/Eisenbieser**  
Kent Thiel  
**Noah's Landing**  
Jim McInnis  
**North Lake Farms**  
Rod Payne  
**North Lake Road**  
Steve & Anne Koch  
**Park Lawn**  
Eric Batzdorfer/Paul Seelbach  
**Sauer Drive**  
Joel Blum  
**Stonehenge Valley**  
Carol Heydauflf  
**Watt Road**  
Paul Lammers  
**Webb's Landing**  
Dave Pruess

We are still looking for a volunteer to represent both Gilbert Drives. It's a small time commitment that ensures your area is represented. Call or email the Contact Information below.

*Thanks again to my great partner,  
Mary Lou, for her talents and expertise  
in this Laker edition. And thanks to all  
the volunteers who make the NLPA  
possible.*

**Contact Information:**  
**Richard Frenndt, President NLPA**  
**Ph: 734.475.3480**  
**Email: [rjfrenndt@aol.com](mailto:rjfrenndt@aol.com)**

4. How many lakes in Washtenaw County are larger than North Lake?  
a. 3 b. 9 c. 0 d. 17
5. How many lakes in Washtenaw County are deeper than North Lake?  
a. 1 b. 3 c. 0 d. 5

## 2014 Lake Management Report Douglas Pulman, PHD, Aquest Corp. Executive Summary

### MONITORING OVSERVATIONS,

#### 2014 Key Findings

\* The North Lake aquatic plant community is dominated by weedy and invasive species. However, the ecosystem appears to be very stable despite the dominance of these invasive species. Most of the critical LakeScan™ metrics suggest that the lake ecosystem is species rich and biologically diverse. The management program appears to be benefiting the lake.

\* High levels of biological and structural diversity (many different plants and animals) are necessary to stabilize the lake ecosystem and minimize the occurrence and total impact of nuisance plant and animal blooms. Most of the critical LakeScan™ lake quality metrics are trending positively from year to year.

#### Narrative

North Lake is very plant productive and is considered to be moderately to very weedy when compared to other lakes in the region. The area of the lake that is the most intensively managed, MZL 3, is also the part of the lake where there is the highest plant community biodiversity. The current management program does not appear to be having a negative impact on this part of the lake, but may actually provide benefits to the lake when weedy and invasive species are suppressed. Ebrid milfoil is a dominant plant in North Lake, but it is being successfully controlled. Ebrid milfoil populations throughout the State are becoming increasingly resistant to control efforts and steps have been taken to prevent herbicide resistance from developing in North Lake. Ebrid watermilfoil dominance reached the highest level recorded in 2014, but the value is not considered to be high. Weather conditions can favor the production of this plant if sufficient ecosystem disturbance is created as a result of harsh winters.

Starry stonewort is one of the weedy species that also dominates the North Lake submersed flora. One of the characteristics of starry stonewort is that it will bloom or reach a level where it reaches an extreme abundance and crowd out other competing plant species. It is also common for starry stonewort to collapse or decline after reaching extreme densities. When this happens large areas of the lake can be made devoid of all plant life. It is impossible to predict when this may happen. Starry stonewort has been observed to collapse in areas of North Lake; however, it has not collapsed everywhere in the lake at the same time. These decline events have resulted in some minor algae blooms. Starry stonewort is a dominant force in determining the nature and quality of the submersed plant flora.

Ebrid (hybrid Eurasian watermilfoil) can be a significant nuisance, but has been co-dominant with several other species in North Lake since 2012. This is believed, in part, to be a testimony to the effectiveness of the milfoil management program. There is no known way to eradicate this species so annual effort must be expended to prevent it from creating nuisance conditions in the lake.

Hybrid weedy pondweeds have dominated the lake large plant flora since 2012. Fortunately, these have responded positively to control. These species or hybrids are being studied to determine what level of management is indicated by the invasiveness of the plant.

Water lilies have become an increasing nuisance in the lake. The dominant water lily is water shield which is resistant to management. This plant is expected to return at nuisance levels in 2015 and it should be expected that considerable effort will be required to suppress the plants where they interfere with developed property access to the open water.

Wild celery can be a very serious nuisance in the late summer in many lakes in Michigan. This plant will often "uproot" and float into shore where it creates a significant and smelly nuisance. It is nearly impossible to manage this plant in an effective manner. However, studies are underway that are hoped to reveal better ways to suppress this potentially nuisance species. The current North Lake contract herbicide applicator has co-developed new technologies that should yield much better and predictable wild celery management outcomes. Until these methods are proven, North Lake will continue to see nuisance conditions created by the floating wild celery mats that are expected to form in late July and throughout August. Fortunately, the dominance of this noxious plant has been declining.

(For complete report go to our website [northlaker.org](http://northlaker.org) and click *North Lake Improvement Project*)