

President's Forum

by Ed Jacobsen

Oh Boy! Two new invasives have been found in Northern Wisconsin but not in our beloved chain. Just when we thought we could identify the ones we already have now we have more. Recently found in the Northwoods is a hybrid version of Eurasian Milfoil, one which looks more like Northern Milfoil, a natural plant we have and like in our chain, but this hybrid is an invasive. Also in our area but not in our chain is an invasive version of Crested Floating Heart, which looks similar to our yellow water lilies. This plant is invasive and deprives the water below it of sunlight eventually disrupting the normal underwater activity. As usual our volunteers will be watching for these two new problem plants.

Speaking of volunteers **Bob Borek** was named volunteer of the year by Oneida County. Bob has been a volunteer for 7 years and is deeply involved in the invasive problem we are controlling in Virgin Lake. He is not only dedicated to the Clean Boats/Clean Waters program but is also involved in the Adopt-a-Shoreline group which spots and reports any suspected invasive activity in our chain. We thank Bob and all of our volunteers for the great work they do each year.

You hear a lot about invasive plants from the Association since we are so aware of what can happen if these plants take root in our chain. Sometimes it sounds like doom and gloom. The fact is we have about one acre of invasives in just two small areas of our chain. **One acre in a chain of 7,407 acres!** That is not bad news **that is good news!** We hear of other areas in Northern Wisconsin controlling the hundreds of acres of milfoil they have growing in their lakes and dropping property values while we talk about one. This is our main fight but not our only one.

On another front we have totally funded and implemented the **"Signs for Safety" program** which we hope will serve to facilitate rescue efforts on the chain. Ed Cottingham has been the one spearheading this program from start to finish and spent most of his summer installing these potentially lifesaving signs throughout the chain. This is just another example of what our board members do to keep the chain as attractive as it is to our residents and visitors.

We are looking into the possibility of getting all of the navigation buoys properly fitted with lights. Lighted buoys are a great benefit to night time navigation for both our residents

and visitors. This is a huge project and an expensive one so it may take a few years but we are working on it.

Thanks for all your support and please read on as the newsletter contains more detailed information about these and many more projects going on in our area.

Thanks, Ed Jacobsen



Three Lakes Chain of Lakes Management Planning Project

Update: October 2013

Submitted by: Dan Cibulka, Onterra, LLC

The Three Lakes Waterfront Association (TLWA) and Town of Three Lakes are involved in several on-going projects that aim to protect and preserve the Three Lakes Chain of Lakes. The TLWA and Town have hired Onterra, LLC, a lake management planning firm, to oversee many of these projects. This partnership has resulted in multiple achievements:

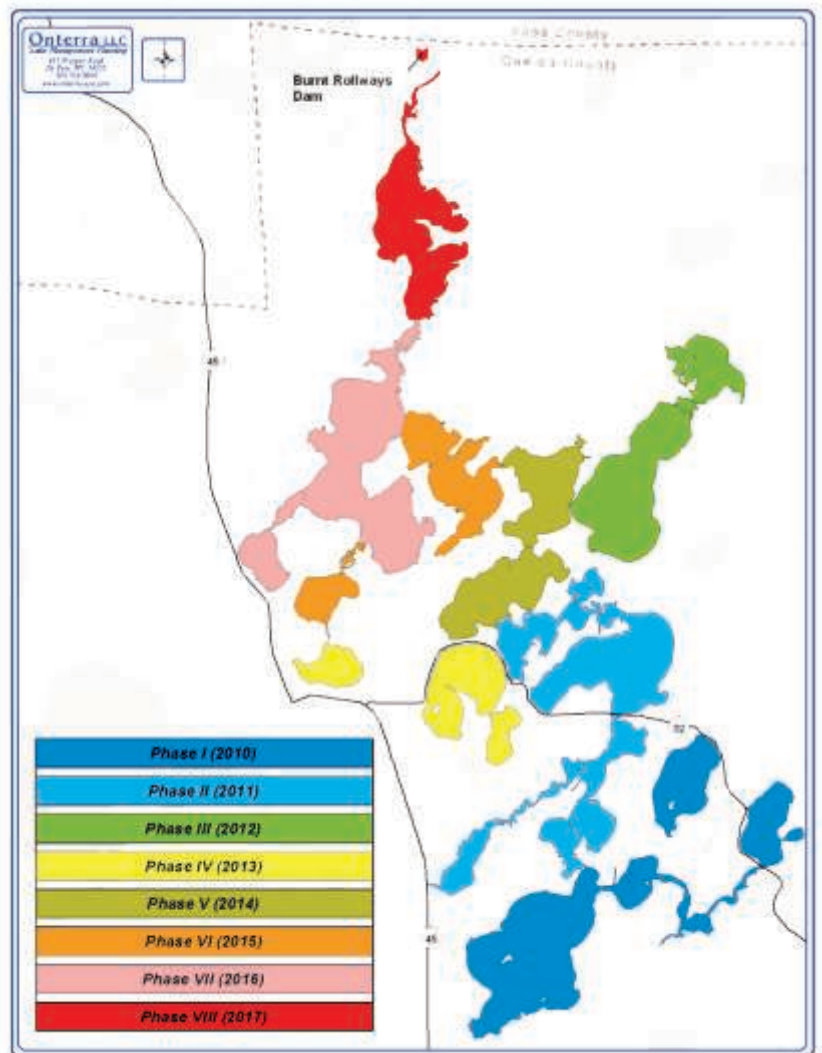
1. The obtaining of eight competitive grants through the Wisconsin Department of Natural Resources state-wide lake management grant program
2. The undertaking of a chain-wide comprehensive management plan as well as specific plans for each individual lake within the chain
3. Continued monitoring and management of Eurasian water milfoil (EWM) on the Burnt Rollways Channel and Virgin Lake.
4. A town-wide aquatic invasive species (AIS) education program that has not only been locally successful, but also proven to be a model that other Wisconsin lake groups are now striving to mimic.

This update intends to discuss activities involved with the comprehensive management planning projects (chain-wide and individual), discuss the continued monitoring of EWM on the chain, and update the status of several current WDNR grants the TLWA and Town are working under.

Management Planning Project

In 2009, Long Lake began a management planning process that was spurred, in part, by the discovery of EWM near the Burnt Rollways Dam in 2006. Since then a multi-phased project has been developed to create a full chain-wide management plan as well as individual plans for each lake in the chain. From 2010-2017, the water quality, watershed, aquatic plants, shoreland areas, fisheries management and stakeholder perspectives will be studied extensively in each lake in the chain during multiple phases. Recently, a draft of the chain-wide and Phase I-II lakes management plan was approved by TLWA and WDNR staff, concluding these phases. During Phase III (field work conducted in 2012), Big Fork and Fourmile Lakes were assessed. Onterra ecologists visited with representatives from the Phase III lakes in July of 2013 to discuss the ecology and management of their lakes. It is anticipated that a Phase III management plan document will be presented to the TLWA in November of 2013, and that an official first draft will be sent to the WDNR for review in December of 2013. As the planning process continues with the remaining lakes in the Three Lakes Chain, the chain-wide management plan will be continuously updated and further individual lake plans produced.

While Phase III studies were being discussed with lake stakeholders from Big Fork and Fourmile Lakes, Onterra ecologists began Phase IV of the project in visiting Maple, Spirit and Moccasin Lakes. Many ecological parameters were investigated, and so their discussion is beyond the scope of this update. However, it can be said at this time that all studies indicate that the Phase IV lakes are in good health and free of submergent AIS such as Eurasian water milfoil and curly-leaf pondweed. During the winter of 2013/2014, Onterra staff will analyze data from these lakes and begin to draft reports to produce to Phase IV stakeholders.



Burnt Rollways Dam EWM Monitoring

EWM monitoring has been conducted on the Burnt Rollways Dam channel since the discovery of the AIS in 2006. In late summer 2012, it was determined that sufficient EWM existed to prepare for a spring 2013 herbicide treatment. Onterra staff contacted Burnt Rollways Dam operators and the TLWA's selected applicator to arrange for temporary modifications in the operation of the dam which would lessen the rate of water flow and thus allow for greater exposure time of the herbicide to the EWM plant beds. A September 6, 2013 survey of the channel indicated partial control of EWM had been met; however, less than what was expected. Shortly after the herbicide treatment, it was learned that actions to modify the flow in the channel through operation of the dam were not taken. As treatments have been effective in this channel when water flow modification were made previously, it is believed this is likely the limiting factor of the 2013 treatment.



A similar herbicide treatment strategy will likely be recommended for spring 2014 on the Burnt Rollways Channel. This is, of course, dependent upon discussions between Onterra staff, TLWA representatives and WDNR staff. Actions will be taken to achieve greater success with the herbicide treatment, including modification of the treatment methodology as well as extended conversations to ensure measures are taken to reduce the flow of water at the dam on the day of treatment.

Virgin Lake EWM Monitoring

Since discovery of EWM in 2010, aggressive monitoring, hand-harvesting, and herbicide treatments have occurred on Virgin Lake in an attempt to minimize the spread of this invasive plant. On



June 25th, Onterra ecologists visited Virgin Lake to survey EWM. The ecologists conducted a meander survey first by boat, and then using SCUBA gear to isolate several suspect areas. The survey turned up about 1.4 acres of scattered EWM that was too great to target with hand-removal. An herbicide treatment occurred in mid-July on this area.



Until this past summer, EWM had been located in a somewhat isolated area, south of the lake's island. On September 6, 2013, aided with information from a Virgin Lake volunteer, Onterra ecologists located EWM along the northern shoreline of the lake. This area consisted of many plants scattered about within a 40'x40' area. Further along the north side of the lake, near the inlet from Lake Julia, another occurrence of EWM was discovered. Here, only 3-4 plants were observed and were all hand-removed. The larger, 40'x40' area was visited later that day and again on September 10th by Onterra staff.



The ecologists donned SCUBA gear and hand-pulled plants within the location. Although many native plants were located in the area and thus made locating EWM plants difficult, the staff members were fairly confident that the vast majority of EWM plants had been removed.

Onterra staff directed attention towards the area south of the lake's only island during both the September 6th and September 10th visit – the area in which herbicide treatments had occurred in 2012 and earlier that summer. The area was surveyed from the surface, and also underwater through transects conducted with SCUBA surveys. Many scattered plants were re-

moved from areas outside of the 2013 herbicide treatment area. Within the 2012 treatment area, however, a rebounding of several clumps and a single small plant colony was observed. Currently, the TLWA, WDNR and Onterra staff are in discussions of a strategy for this area. Most likely, the area will be targeted with an aquatic herbicide in spring of 2014 and followed by SCUBA survey monitoring and hand removal if applicable.



Three Lakes Chain Grant Assistance

As previously mentioned, the TLWA and Town of Three Lakes have been highly successful in securing state grants to fund comprehensive studies, AIS management and AIS education activities. A management plan for Long Lake was made possible through a WDNR Lake Management Planning Grant, while subsequent AIS monitoring activities on the Burnt Rollways Dam channel in 2009 were funded through an AIS Early Detection and Rapid Response Grant. Comprehensive studies for Phase I-IV lakes, AIS monitoring/management on the Burnt Rollways Channel (2010-2014) and Virgin Lake (2010-2014) as well as Town-wide AIS related educational activities (2010-2014) have been funded through Lake Management Planning grants. These competitive grants have been applied for on an annual basis since 2010 and, as previously mentioned, have been successful each year. This past spring, the TLWA applied for funding through a different grant category – **the WDNR's Lake Management Protection Grant category**. This grant category allows for the same management activities to be conducted, though has a higher monetary cap. As a result, two phases, Phases V & VI, can be funded under one grant. The TLWA learned in May that they were successful with their application, thus securing funds to continue with comprehensive studies and AIS management/education on the Three Lakes Chain of Lakes for two more years.

Future Three Lakes Chain Management Planning Activities

With the securing of funds through the Lake Protection grant category, comprehensive studies will continue on the Three Lakes Chain. Phase V (2014) will include Little Fork and Medicine Lakes, while Phase VI (2015) will include studies on Round, Island and Townline Lakes. Additionally, AIS monitoring and management activities will continue on the Burnt Rollways Channel and Virgin Lake during this time. As the project continues, Onterra staff will continue to meet with Three Lakes Chain stakeholders to keep them updated on the results of comprehensive studies as well as AIS monitoring.

Alternative Responses to EWM Invasion

By Norris Ross

No one wants to disturb a natural ecosystem or ruin a beautiful, natural place. Unfortunately, human activities often do just that. The introduction of **non-native species (often called “invasives”)** is a result of human activities that can disturb a natural place.

The introduction of Eurasian Water Milfoil (EWM) into our northern lakes can dramatically alter this beautiful resource. Left to its own aggressive reproductive devices, EWM can take over a lake and potentially destroy it. Numerous examples are easily found in southern Wisconsin lakes.

Once EWM is discovered in a lake, what are the options for dealing with it? The options currently available include the following:

- Do nothing
- Hand pull the plants (scuba diving, etc.)
- Propagate and release weevils that eat the EWM
- Use physical barriers (mats, etc.)
- Employ chemical treatments



ADOPT A SHORELINE

A brief, bottom-line description of the pros and cons of each of these is provided here. Most often a plan to combat EWM in a lake will include the use of more than one of these options except the option of doing nothing. (NOT A GOOD CHOICE!)

If caught early (the reason our Adopt-A-Shoreline program is so important) hand removal of EWM can be very effective. This usually works well in shallow areas, and knowing techniques for careful total plant removal is critical. Once the volume of EWM gets into the “acres” category or in deeper water, hand removal becomes much more difficult and expensive. Scuba divers, training and “boom techniques” to capture floating fragments becomes paramount and more expensive. This work goes beyond using volunteers. Hired professionals are required.



(Milfoil Weevil)

There is a native weevil that feeds on EWM. Experiments have been done to raise the beetles in large numbers and release them into EWM beds. The results of these experiments have been mixed to date. Unfortunately, fish love to eat the weevils. The weevils are very expensive to raise, and the results are very slow to develop. These methods are currently very expensive and perhaps not too effective.

Some experiments are being done trying to find physical barriers that can be used to kill invasive plants. Mats (various materials have been tried) are placed on top of unwanted plants. The mats shade out the plants and kill all the vegetation under the mats. The cost of mat materials, keeping them in place, and the size limitations of acre-size mats make the technique very theoretical at this time. No work has been done that seems effective for selectively killing specific plants. Perhaps this method or some other new technique might emerge in the future to help us battle EWM.

Most large outbreaks of EWM have been treated chemically. No one wants to put chemicals into our lakes, but at the moment, for large beds of plants, it is the most effective control method. It is very costly and must be done in early spring before the native plants emerge. (The EWM is up and running in the spring before the native plants, and that is why it takes over; it grows under the ice and is faster than the native plants for the rest of the summer.) Studies are being done to determine any long-term effects of multiple chemical treatments on the entire ecosystem.

All lakes are different and the treatment methods for EWM usually involve a combination of more than one method. Chemical treatment is always the last resort after other less invasive and cost effective techniques have been exhausted. Once EWM is in a lake, it is **nearly impossible to eliminate. It becomes a “control situation” with continual use of alternative methods of monitoring.**

The Three Lakes Waterfront Association is fortunate to be able to employ the services of a competent lake management planning and monitoring company (Onterra, Inc.) Their constant patrolling of our waters and AAS volunteer monitoring is invaluable in EWM detection. Also crucial in the fight against EWM is volunteer boat launch monitoring to prevent the invasive from entering our waters initially.

Black Asphalt vs. Clean Water – Keeping PAHs Out of Our Lakes, Streams and Wetlands

David S. Liebl, UW-Extension stormwater specialist

(Re-printed from Lake Tides Vol. 38 No. 3 Summer/Fall 2013)

Thinking about fixing up your blacktop driveway or parking lot? Did you know some of the sealcoats on the market could be hazardous to our health and the health of our waters and the creatures that live there? Polycyclic aromatic hydrocarbons (PAHs) can contaminate stormwater that runs off driveways, parking lots and playgrounds where coal tar-based asphalt sealcoats have been applied. This class of environmental pollutants contains carcinogens affecting both human and aquatic health.

Sealcoats are applied to improve the appearance and longevity of asphalt pavements. When pavements are in close proximity to water bodies, it is recommended that sealcoats low in PAHs should be used to minimize risk to people and the environment.

When shopping for sealcoats, or contracting with a sealcoat applicator, be sure to specify coal tar-free products for your asphalt surfaces. To learn more about protecting your health and the environment, and where to purchase coal tar-free sealcoats, check out the following UW-Extension fact sheets:

Coal Tar-Based Asphalt Sealcoats – A Health and Environmental Hazard

[www4.uwm.edu/shwec/publications/cabinet/p2/Sealants health and envir3.pdf](http://www4.uwm.edu/shwec/publications/cabinet/p2/Sealants%20health%20and%20envir3.pdf)

Avoiding Coal Tar-Based Asphalt Sealcoats

www4.uwm.edu/shwec/publications/cabinet/p2/Non-Coal%20Tar%20applicators%206-7-13.pdf This factsheet gives names of Wisconsin applicators who have certified they do not use coal tar-based sealcoats, and also gives a list of carcinogens found in coal tar-based sealcoats.

Choosing a Coal Tar-Free Sealcoat

[http://www4.uwm.edu/shwec/publications/cabinet/p2/Choosing A Sealcoat 6-7-13.pdf](http://www4.uwm.edu/shwec/publications/cabinet/p2/Choosing%20A%20Sealcoat%206-7-13.pdf)



Lakeside Safety Signs Program

The new lake safety sign program conceived by Three Lakes Police Chief Scott Lea, and funded and installed by volunteer members of the Three Lakes Waterfront Association is now nearly complete. As of this writing, 68 of the 71 signs are in place with the others scheduled to be installed shortly.

As previously reported, this program is designed as a means by which boaters using the chain would be able to quickly identify their location on the water to 911 operators or other emergency responders. The signs have number codes which will give responders an instant geographic read on what body of water the call is coming from, what the closest/easiest access to that spot is by land, etc. Similar in design to the location signs on snowmobile trails and fire signs, these signs are green in color, and are located at each bridge where a

boater changes from one body of water to another...and strategically placed on shorelines. In addition, information regarding this program, how it works, how to work it, etc...are located at chain boat landings.



Headed by TLWA board member Ed Cottingham, the installation effort racked up 63 hours of actual installation time, not counting time on the phone to secure permission from landowners, etc. In addition to his time, Ed drove over 600 miles in the execution of this job. Thanks Ed

(Left: TLWA Members Ed Cottingham and Norris Ross install the first of the safety signs)

New Alien Invasive Species Alert

As if there weren't already enough invasive species to worry about getting into our waters, here comes a new threat in the form of Yellow Floating Heart; and a Hybrid Eurasian/Northern Water Milfoil.

Yellow Floating Heart is a floating-leaved aquatic plant that grows very quickly and densely. While its leaf structure is very similar to our native water lilies, this plant can multiply much faster than our native version; easily forming a complete "leaf mat" on top of the water. As a result it reduces the amount of sunlight getting to the native plants living underneath it. It can also form large mats of roots and /or rhizomes pushing out our native species.



So far, the only known infestation of Yellow Floating Heart is in Gordon Lake located in the national forest in Forest County. They are attempting to control this particular patch by hand-pulling, a tricky task because each piece of rhizome that is left behind could start a whole new colony.

Yellow Floating Heart is a prohibited species, in that it cannot be transported, transferred (bought or sold) introduced or possessed. The recent discovery of Yellow Floating Heart in Gordon Lake is the first discovery of this species in a natural lake. Until now, it had only been found in two ponds in the southern part of the state. It is thought that the Gordon Lake plants happened due to an aquarium or pond release.

Similar to Eurasian Water Milfoil and other aquatic invasive species, boaters could unknowingly transport this invasive via their motors and trailers, as well as contained in muck on an anchor that wasn't thoroughly cleaned when removed from the bottom.

Hybrid Eurasian/Northern Water Milfoil has been around for a while, and was first spotted in Pike Lake in Forest County in the early 1990s. It has also been spotted in Crane Lake in Forest County, and several lakes in Florence County. When the hybrid was first found in Pike Lake, they did not have any EWM on the lake. It is difficult to easily identify the hybrid, as it shares characteristics of both Eurasian and Northern Water Milfoil. The only current way to definitively label the plant as a EWM hybrid is through DNA testing. For purposes of control, the hybrid is treated as Eurasian Water Milfoil.

In both cases, if you find a plant that looks suspicious, report it. The waterfront association can arrange to either help in the identification, or arrange for further review by either Oneida County or DNR invasive species specialists.



Three Lakes Waterfront Association Scholarship Winners

As we reported in our spring newsletter, this year the association presented two \$1500 academic scholarships to deserving Three Lakes High School graduates. This year's winners were Cassie Hoger and Jared Kortenhof; pictured here with association president Ed Jacobsen and board member Jerry Schiedt who heads this program for the association. Cassie and Jared are both attending UW Stevens Point this fall with Cassie pursuing a degree in Environmental Engineering and Jared a degree in Wildlife Ecology. The association has awarded a total of \$23,000 in scholarships over the past 14 years.

Clean Boats/Clean Waters....Adopt-A-Shoreline Volunteer Programs

The 2013 season was another successful one for the two highly acclaimed volunteer programs conducted by the Three Lakes Waterfront Association.

The Clean Boats/Clean Waters effort which conducts inspections of boats and other watercraft being launched into the Three Lakes Chain of Lakes had 28 volunteers this year, as well as two paid interns. The paid program was a pilot effort conducted in cooperation with the Town of Three Lakes. The two paid interns were Three Lakes High School students Jena Miles and Derek Thorn.



(A volunteer from the Adopt a Shoreline programs conducts a late season survey for EWM)



(Intern Jena Miles inspects a boat going over the Burnt Rollways dam for invasive species)

The volunteer effort for Clean Boats/Clean Waters resulted in nearly 500 hours of time, while the paid interns spent an additional 968 hours. The main focus of the paid intern effort was on the Burnt Rollways lift and boat landing, and the landing at Town Line. The non-paid volunteers concentrated on the landing at Sunset Grill on Big Stone Lake, with additional time dedicated to the landings on Medicine Lake, Big Lake, and the remote landings at the Laurel Lake campground, Chicken in the Woods road, and the remote landing on Big Fork off Four Mile Creek Road.

A total of 2537 boats were inspected this past year, with education on AIS conducted with 6599 people.

While the numbers of volunteer hours had not been calculated for the Adopt-A-Shoreline program prior to publication of this newsletter, it is expected that they will be similar to the number of hours averaged over the past few years, at nearly 500 hours.

It is likely that the fact that the Three Lakes Chain of Lakes has only two known, relatively small patches of Eurasian Water Milfoil, is due to the tireless efforts of the volunteers in these two programs. But, we can't afford to relax our vigil. We need more volunteers to continue this important work for both programs. Especially needed are volunteers for the Adopt-A-Shoreline effort on Big Stone and Dog lakes. In addition, we need lake captains for Crystal, Townline and Rangeline lakes. Lake captains are responsible for recruiting volunteers to conduct survey/monitoring on their lakes, and for coordinating their reports. Please think about your schedule, perhaps you can find a few hours in a month to volunteer for one of these programs? If so, please contact Bob Agen for the Clean Boats/Clean Waters program at 715-546-3893, or agen-robert@gmail.com. Ed Martens heads the Adopt-A-Shoreline program and can be reached at 715-546-4291 or emartens1@yahoo.com. We need your help.

Speaking of volunteers...TLWA member/volunteer Bob Borek was recently singled out and recognized by Oneida County for his many years of service to the association, and to the overall fight to prevent AIS from getting into our waters. In addition to his current effort with the Clean Boats/Clean Waters program, Bob has been an active participant in the battle to contain/manage the Eurasian Water Milfoil recently discovered in Virgin Lake. Hats off to Bob for his recognition of, as Oneida County put it: "Outstanding Lake Stewardship".



(Bob Borek)

Shoreline Alterations

By DNR Warden Pat Novesky

Today the lakes have quite a few enemies that can have a dramatic impact on the quality of the water, and the quality of the afishery they can produce. For instance we have all been educated on the spread of invasive species and the negative impact these can have. We have some control over this by simply modifying our behavior so that we can minimize the spread of these invasive species so we can maintain a high quality of fishing and recreation on the Three Lakes Chain.

One other enemy of the lakes that can have very negative consequences is illegal and improper shoreline development. Each year the WI DNR investigates numerous complaints of illegal shoreline projects; some of which can have a dramatic negative impact on the lakes. These issues can range from a project that is slightly outside the lines, but with some modification and guidance by the WI DNR, along with a little cooperation by the landowner, these can actually be permitted and in some cases actually benefit the lake. There are however other projects that are completed both by landowners and irresponsible contractors that have a dramatic impact on the lakes **and cause irreversible damage to the lakebed and shoreline as people try to create their own "lil piece of heaven"**

Examples of these can be illegal dredging that ruins several acres of fish spawning habitat, removal of weeds/wood in the water, excessive shoreline grading that results in severe runoff related issues, illegal filling to make a beach, improper rip/rap, or placing rocks that are too large to protect the shorelines etc. These projects are becoming more and more common as landowners are trying to improve lesser quality lands that contain more wetland swamp frontage, or trying to place one or two 24 foot boats in an area where the previous owner had a dock with a little 14 footer tied up. The quality of vacant lakefront properties has declined over the years; and many of the more desirable properties have all been developed; so many of the remaining properties are those with wetlands connecting the lakes, shallow or stump-ridden shorelines, or water that is difficult to access, all of which are factors in making landowners want to alter the shorelines.

The good news is that many of these types of projects are able to be completed through a permit process. The permit is meant to provide guidance so that these projects are completed in such a way that they create minimum disturbance to all the ecosystems and lakebed. If you want to rock your shoreline to prevent erosion, DNR will likely permit it with some guidelines; guidelines that will help you prevent erosion while maintaining an environment that is wildlife and fish friendly. Weed removal? Need to dredge to access your dock? DNR will likely permit that as well, with some guidelines that will meet the needs of the landowner while maintaining as natural an environment possible.

The goal is to prevent people from just putting the backhoe in the water and doing what they may think is right; when it could be dramatically wrong and the lake will suffer for it. I could fill a book with regulations on shoreline development, and Oneida County Zoning could do the same with their ordinances. The easiest advice is, **and I hate to steal a line from the power company, "call before you dig". As a very general rule, if it is a project below the ordinary high water mark, call the WI DNR, if it is above or on land, call Oneida County Zoning.** Each of these agencies can help you obtain the results you might be looking for, while maintaining a quality environment for fish, wildlife and naturally occurring aquatic plants.



(Example of primitive undeveloped shoreline)



Factors like invasive species and irresponsible shoreline development can have a more negative impact on our lakes than a busload of the most law breaking fisherman or boaters. The good news is, taking the time to contact the proper authorities beforehand and come up with a plan that is not only environmentally friendly, but also within the parameters of the law, can greatly minimize the impact these factors have on our lakes. It may also save you the possibility of an uninvited guest showing up with a badge and citation.

Warden Patrick Novesky (715)365-8948
Wisconsin DNR Rhinelander Service Center (715)365-8900
www.dnr.wi.gov/topic/waterways (for shoreline development information)
www.dnr.wi.gov (for all other information)
Oneida County Zoning (715)369-6130
www.oneida.wi.gov

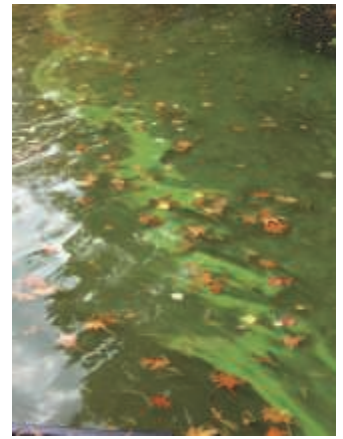
(Wisconsin DNR Warden
Pat Novesky)



Water Quality Report

By Fred Knoch

As I write this report the fall colors are blazing, the temperatures are as mild as a summer day, and leaves are just beginning to fall. This marks the end of the water sampling season for me, but I managed to get in the last reading on the 2nd of October, an altogether beautiful day. The Secchi disk confirmed my observation of algal bloom, in that the water clarity was diminished considerably compared to September, due to suspended algae in the water. The lake trophic state remained in the Mesotrophic category, with dissolved oxygen levels reaching zero on the bottom in the months of July and August, with temperature and oxygen stratification occurring around 15-18 feet of depth. This pattern is fairly typical of the lakes of the Three Lakes Chain which are deeper than 15 feet. Chlorophyll levels, representing plant and algae growth in the lakes, have remained virtually unchanged for many years, as has the nutrient phosphorus levels upon which their growth depends. As we know, phosphorus enters the watershed via shoreline development, runoff containing phosphorus from fertilizers, and agricultural sources.



(Green Algae Bloom)



(The author shown with an array of equipment used in water quality monitoring)

The stable levels of these substances in the lakes are a testament to the vast watershed of over 75,000 acres pouring enough water into the chain to result in a turnover rate of nine times yearly in Long Lake...stability through dilution. I guess we've been lucky so far. Lakes which are closer to the runoff from the cranberry bogs have higher levels of phosphorus than others, as evidenced by a level of 36.2ugm/l in Big Lake and 75.8ugm/l in Crystal Lake. This compares to a level of 21.8ugm/l in Long Lake, which is a mixture of all the water in the chain before it goes over the dam. Isolated lakes, such as Maple have low levels, 7.8ugm/l. All of the data is public and can be found on the website: <http://dnr.wi.gov/lakes/clmn/>.

As all readers may infer, I am very passionate about monitoring our water quality. I believe that only by remaining vigilant and concerned about our lakes can we identify and remedy threats to our beautiful ecosystem. My thoughts represent just those of a single individual among multitudes of individuals who share the same goals.

These individuals are represented by the Three Lakes Waterfront Association, an organization dedicated to the good fight, as exemplified by its successes in dealing with AIS. The enthusiasm of the members, and their concern for the lake system was illustrated dramatically at the annual meeting, when in response to my plea for volunteers, eight new individuals volunteered to participate in water quality monitoring.

These individuals added eight lakes to the list of lakes of the Three Lakes Chain which are being monitored for water clarity and chemistry. Now eighteen lakes of the twenty are included, with only Rangeline Lake, and Four Mile Lake remaining without monitors. On behalf of the TLWA, and all of the people who recreate and enjoy the opportunities that the chain provides, THANK YOU !

My next observations: ice on and ice off.



(New volunteers attend training session at Burnt Rollways Dam)

Underwater Comparison of Native Northern Water Milfoil and EWM

Here are some interesting underwater comparison photos taken this past September on Virgin Lake by the dive team from Onterra. One shows Native Northern Water Milfoil and the other shows Eurasian Water Milfoil. While the physical characteristics are different for the two versions, sometimes it can be hard to distinguish exactly which one you are looking at. If you have any doubts about milfoil you find in your lake, contact your lake captain or any member of the Three Lakes Waterfront Association board of directors. As always, if you have some time to contribute either as a volunteer inspector at a boat landing; or to monitor your lake, your effort would be a valuable addition to our efforts to effectively prevent additional invasive species from entering our waters.



(Native Northern Water Milfoil)



(EWM)



The end of another boating season

(The Three Lakes Town Crew removes buoys from the Chain)

Association Membership Update

TLWA's membership is strong and growing. We are fortunate to have a base of more than 700 lake property owners who place a high priority on supporting TLWA's initiatives and investments that have been so successful in protecting our waters and retaining the pristine beauty of the Three Lakes Chain and the surrounding area.

Renewals for the new fiscal year (July 1, 2013 to June 30, 2014) have been greater than 90% thus far and we trust that they will approach 100% by end of year. Moreover, one-third have opted for multiple year memberships. We are also happy to have welcomed back more than 60 former members whose memberships had lapsed in 2010 through 2012.

New memberships are also growing as a result of the campaign we launched this past September. Our goal is to reach out to every lake property owner, ensuring they are aware of the TLWA mission and its programs, and to invite them to join us in the long term commitments that are necessary to preserve our lakes for our families today, and for future generations.

Not a member yet? It is never too late, and it is easy. To join up simply contact Mike Freehill at mhfreehill@gmail.com.

(Membership Committee members Doug Scheffen, Norris Ross and Chairman Mike Freehill review a renewal mailing.)





2012—2013 Board of Directors

Officers

President	Ed Jacobsen
Vice President	Norris Ross
Treasurer	Stan Wargolet
Secretary	Paul Matthiae

Directors

Bob Agen	Doug Scheffen
Ed Cottingham	Jerry Schiedt
Mike Freehill	Sandy Schlaefer
Fred Knoch	Larry Swanlund
Ed Martens	Paul Wussow

Program Leaders

Adopt-A-Shoreline	Ed Martens
Clean Boats / Clean Waters	Bob Agen
Terrestrial Species	Paul Matthiae / Jerry Schiedt
Water Testing	Fred Knoch / Sandy Schlaefer
Lake Management Planning	Ed Cottingham / Norris Ross
Membership	Mike Freehill
OCLRA	Norris Ross
Publicity / Newsletter	Larry Swanlund
Website	Paul Wussow
Scholarship	Jerry Schiedt
Shoreland Zoning	Norris Ross
Water Safety	Ed Cottingham

For information regarding important issues impacting our lakes and your own lake property, visit the TLWA website at:

www.TLWA.org