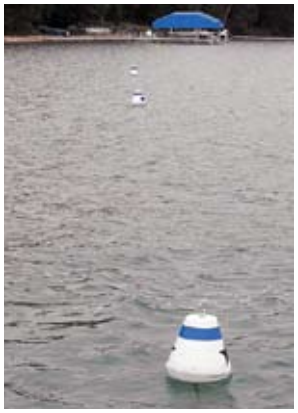
TLA Quarterly

JULY 2013

President's Letter

Greetings to all,

I have something important and difficult to discuss with you, today. About twenty years ago, a new project was launched by the Three Lakes Association, inspired and led by John S. "Jinks" Ross, then the Chair of the TLA Water Safety Committee. That project was the star-marked measured-distance mooring buoy program. Carefully placed, at a measured distance of 100 feet from the shore, or dock, or swim raft; and marked in a clear and distinctive manner, these buoys would give the boating public a visual clue regarding the point at which a slow no-wake speed is called for, and the buoys would provide the marine patrol with useful enforcement information.



On the left is an aerial photograph of just one such abuse – a "necklace" of over a dozen star-marked buoys placed considerably more than 100 feet from the shoreline, around this one property. They do not abide by the "gentlemen's agreement" under which the TLA Star Buoy has been tolerated by our law enforcement officers. These buoys present an obstruction and clear hazard to navigation. On the right is a photograph some of those same Star Buoys lined up like fence posts.

The TLA star-marked measured-distance mooring buoy program was developed by really good people with a really good intention. The people who misuse these buoys, either by placing many of them like a picket fence off their property, or by placing them several hundred feet out into the lake, or both – have destroyed the original intent of the program, and have engendered an atmosphere of belligerence and animosity around our lakes.

It's important to remember that our program was never entered into the law regulating the use of buoys – the star marking is NOT a legal marking. The program was created as a "gentlemen's agreement" nearly twenty years ago. But, such agreements can exist only when everyone adheres to the rules of the agreement. Early on, TLA pressed for acceptance of the program into the applicable code, but didn't make much headway. Riparian owners who flaunt both the existing law and the intent of the star-marked buoy program, put the entire program in jeopardy. I don't know how long the program can survive if we are unable to persuade people to follow the rules.

Recently, I attended a meeting on this topic with the DNR enforcement officer responsible for our area, Lieutenant Jim Gorno. He was very favorably impressed with the manner in which TLA had gone about developing the program and the accurate instructions that had been provided for exactly how to place and use the mooring buoy marked with a star. But, the abuses have become intolerable.

Lieutenant Gorno is sympathetic to the intent of the TLA Star Buoy program, but his function is law enforcement. The star-marked buoy program will only be allowed to continue if the people who place them abide by the original agreement and intent of the program. It would be sad to lose the excellent program, but it is wise and prudent to take action when abusive situations are uncovered.

Best,
Tina

In this issue

The Mission of the Three Lakes Association is to provide leadership to preserve, protect, and improve the environmental quality of the Elk River Chain of Lakes, especially Torch Lake, Clam Lake, and Lake Bellaire, for all generations

THREE LAKES ASSOCIATION

Founded 1966

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The TLA Quarterly is published by the Three Lakes Association

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231-350-7234
P.O. Box 689 • Bellaire, MI 49615
info@3lakes.com

Jack Norris, our legendary Director Emeritus, died April 3, 2013, a week after attending his final TLA board meeting via video teleconferencing from home on March 26. Jack served on the TLA Board of Directors, beginning in the early 1970s and continued until his death. He served in several positions, including Zone Director, Water Quality Chair, Vice President, President, and Director Emeritus for Life. Jack will long be remembered in Northern Michigan for this portion of his legacy: helping to preserve and protect Torch Lake and the surrounding areas.

Jack was a Michigander from before birth, a peripatetic globe trotter, and a staunch environmentalist. Growing up, he lived on Long Island, New York and in Evanston, Illinois as his family moved. He spent time on Torch Lake at the cottage his father and grandfather built at the south end of the lake. Unable to have furry pets because of his younger brother's asthma, Jack became interested in herpetology and developed considerable expertise in the subject.

His herpetology knowledge came in handy when his parents wanted to purchase what became the family farm in Rapid City. The owners of the property vacillated between wanting to and not wanting to sell. While on a specimen-collecting trip for the Field Museum of Natural History in Chicago, he and a friend "found" many snakes on the property. As the owners were quite frightened of snakes, these discoveries helped them to overcome their indecision and go ahead with the sale of the property which remains the family homestead still.

Jack was born April 5, 1921, son of Earl and Carol (Gray) Norris. He married Marian Denton on April 27, 1940. Jack and Marian had two daughters, Tina (Larry) Fields and Dr. Rebecca M. Norris, who continue to actively work to support the work of the TLA.

After moving his family multiple times, including time in Belgium, France, and Japan, Jack accepted a management position with a firm in North Chicago. For the next dozen years, or so, Jack split his time between northern Illinois and northern Michigan, alternating between his position as a 'suit-and-tie' management executive and as a machete-wielding working man in Trees, Inc., the seasonal Christmas tree business that he and his father operated together, until his father's death in 1974, when Jack took it over and moved his home to Rapid City, Michigan.

Jack's parents, Earl and Carol Norris, became members the year after TLA came into being in 1966; their sons, Jack and Brad, promptly followed suit. Jack and Brad both remained dedicated to the vision and mission of TLA for the rest of their lives.

Please join the family in a celebration of Jack's life on Sunday, August 4, 2013 from 2 -5 pm at the farm - 5860 Aarwood Road NW, Rapid City, MI.

TLA Spotlight: Wilhelmina Witt

I am Wilhelmina Witt, 2008 and 2009 Three Lakes Association Intern. I graduated from Central Lake High school in 2010 and am now working towards a degree in environmental biology at Tabor College.

Life since graduation has been an enriching adventure.

Freshman year of college was a time of tremendous personal growth. I met people from all over the United States from all different backgrounds, and made many friends. From running around in torrential downpours, surviving grueling labs, praying together, starting a band, going on spelunking trips, to having great late night conversations, I really do have a wonderful group of close friends and acquaintances. Several of my friends and I began doing a VBS style ministry in inner city Wichita with K-12 kids every Friday night, and before I knew it I had committed to leading the teens group.

I discovered that the college recycling program consisted of good intentioned recycle bins hidden in an underutilized closet in one of the student centers. One morning I decided to sort and organize the bins in the closet so that they would be easier to use. Shortly afterwards the Tabor maintenance supervisor hired me to promote and collect the recyclables all over campus. This has been a success.

By sophomore year time I had finished enough gen. ed. classes to take some that applied directly to my major, such as entomology and zoology. During a notable field trip we learned how to pregnancy check cows by sticking our arm deep inside of their intestinal tract and feeling around for the uterus. Inspired by my great uncle, I took an independent study course in taxidermy, which is a skill I hope to perfect throughout my life.

Last summer I took a five-week break from my usual work on my family's sustainable farm to take classes at Au Sable institute of Environmental Studies. I learned about the chemistry of freshwater ecosystems doing sampling and analysis at Big Twin Lake, Ellsworth Shale pits, and Grass River among other things.

I decided to fulfill my required internship during that fall semester instead of returning to Kansas. So I decided returned to Au Sable, this time as an environmental education intern. I spent six weeks dressed up as a historical figure teaching Michigan history and environmental stewardship to third through sixth graders.

After that I went and traveled to Nepal with my family for three months. We ended up riding on the top of a bus over a mountain pass, getting Giardia, living at an orphanage, fixing solar panels, going to the jungle, meeting an archaeologist, discovering ancient ruins, and encountering all sorts of other unanticipated excitement.

I returned to college this past semester and will graduate with my bachelor's degree in December 2013. After graduation I plan on seeking a series of additional internships to build experience before I find a career in the environmental field.

This summer you might see me interning at Grass River Natural Area or working on my family farm.

Natural Shoreline Lakescaping & Restoration - Part 2, Plan Design

By Bloomin' Buddies - Diane Crandall

In the last edition, we discussed specific property concerns, including soil erosion and storm water run-off. The project design starts with a site plan or base map, which must include certain standard information: an arrow indicating which direction is North, the scale to which the map is drawn, property lines with measurements, the position of roads and access points, existing structures, water access, dock locations, yard traffic patterns, and entertainment areas.

Once the base map has been created, it should be very carefully reviewed. It is very important to consider where picnic tables, lawn furniture, and fire pits will be placed; where the water toys will be kept, and where the docks and hoists will be stationed, as well where these items will be stored for the winter.

Figure 3.4. Base map illustrating the various zones. Source: Julia Kirkwood

The next step is to indicate on the base map, the zones of the property – upland, wetland, and aquatic. The upland zone is the area of dry soils. The aquatic zone is in the lake. The wetland zone is between the upland and aquatic zones. The different zones call for different plants and site-specific treatments. Breaking the property down into its zones makes the project easier to address.

Once the base map is complete, a specially designed software program allows the homeowner to explore all the candidate layouts. Using actual photographs of the site scanned into the program allows for even greater customization, producing a truly personalized lakescaping design. The software offers temporary views of the restoration project, throughout the process, based on the homeowner's specific choices along the way. This part of the process is the most creative and the most time-consuming. Experience teaches that the importance of this step simply cannot be overstated. Recreating nature does not happen overnight.

With the basic design worked out, the exact number of plants and materials needed can be determined, based on spacing, growth rates, and the magnitude of the required shoreline

See NATURAL LAKESHORE on page 6

2012 Water Quality Monitoring Results

By Dean Branson and Becky Norris

Since 2004, TLA has participated in the Cooperative Lakes Monitoring Program (CLMP), a collaborative program between Michigan Lake & Stream Associations, Inc. and the Michigan Department of Environmental Quality (MDEQ). TLA's participation requires an annual fee of $650 for equipment and supplies plus the time and effort of four volunteers. Each volunteer collects and processes a water sample each month for Chlorophyll-a content, as an indicator of algae & phytoplankton organisms. They also make weekly measurements of the water clarity by lowering a Secchi Disk, an eight inch black and white disk into the water and recording the maximum depth at which the disk can be seen Twice a year the volunteers also collect water samples for M-DEQ's lab to measure total phosphorus concentrations, the rate-limiting nutrient in these lakes. TLA's CLMP volunteers in 2012 were:

- Duane Drake sampled Lake Bellaire and TLA's CLMP coordinator
- Art Hoadley sampled Clam Lake
- John Kreag sampled the south basin of Torch Lake
- Kathleen Anne Peterson and Dolores Hibbard sampled the north basin of Torch Lake

TLA truly appreciates their efforts. This data provides a snapshot of the health of the lakes in much the same way blood pressure and temperature assess human health. If the screening of the lake water quality were to show unexpected findings, then follow-up, more comprehensive testing would be triggered.

The most important conclusion from the data (table below) is that all three lakes continue to show unchanging, very high water quality, i.e. pristine water quality. The data for 2009 and 2011 were omitted to simplify the Table. Water clarity, measured with the Secchi Disk was measured approximately 16 times each year, and continues to show the same seasonal cycle as has been found year after year; maximum water clarity in the spring and minimum in late summer. Detecting this cycle is good news because it confirms our basic understanding of the way these lakes have operated for many years.

Typically maximum water clarity values are seen in May, before the seasonal period of algal growth and before the onset of calcium carbonate precipitation. As the water warms, the water clarity naturally becomes less. It is reassuring to confirm natural biological and chemical processes are working as expected. Warm water causes algae and phytoplankton organisms to grow, and causes the formation of small particles of insoluble calcium carbonate. The suspension of these organisms and small particles of insoluble calcium carbonate in the water column reduces water clarity.

In all of our lakes, the Secchi Disk depth values appear to be dominated by the formation of insoluble, very small particles of calcium carbonate as the water warms during the summer. As the particles grow in size, they sink to the bottom of the lake and stay there forever. This water purification process removes 90% of the phosphorus that enters Torch Lake and 75% from Lake Bellaire. The measured levels of chlorophyll-a in Lake Bellaire, 1.5 µg/l (micrograms per liter) and 1.3 µg/L in Clam Lake compared to <1.0 µg/l in Torch Lake indicates that algal growth in Lake Bellaire and Clam Lake also affect water clarity to a small degree.

The measured phosphorus data may appear reassuring, in terms of the lack of a clear increasing trend over the last few years, but M-DEQ's "reporting level" for these measurements (3 ppb; parts per billion by weight) is not sufficiently sensitive to reliably measure the concentration of total phosphorus in Torch Lake. Based on several hundred samples measured in 2006 with a detection sensitivity of 1 ppb, the average concentration of phosphorus was 2.6 ppb in Torch Lake. The wide range of values reported may be the result of minor contamination of a single water sample.

Sixth graders measured 47 ft of water clarity in Torch Lake on May 9, 2013

2012 Water Quality Monitoring Result Summary

	Bellaire		Clam		South Torch		North Torch	
	Min	Max	Min	Max	Min	Max	Min	Max
Secchi Depth (ft)								
2004-2007	unavailable	20 to 22	unavailable	22 to 22.5	16 to 28	35 to - 35	14 to 18	40 to 44.5
2008	9	20	13	26	13	42	16	42
2010	8	20.5	12	22	15	46	no data	no data
2012	8	27	10	20	18	41	17	36*
	Bellaire		Clam		South Torch		North Torch	
Phosphorus, total (ppb)								
2004-2007	<4 to 9		3 to 12		~1 to 10		~2 to 14	
2008	4		8		<3		<3	
2010	<3 to 7		<3 to 5		<2 to 8		<3	
2012	<4		<3		<3		Analytical error	
Chlorophyll a (µg/l)								
2004-2007	1.3 to 1.7		1.1 to 2.0		0.5 to <1.0		0.5 to <1.0	
2008	1.5		1.3		0.5		0.5	
2010	1.5		1.3		0.5		<1.0	
2012	<1.0 to 2.0		<1.0 to 2.7		<1.0 to <1.0		<1.0 to <1.0	

Large Woody Debris Demonstration Project

An introduction to Large Woody Debris (LWD), how it can improve the aquatic habitat of the Grass River, and responses to Frequently Asked Questions.

The Waterways Work Group (WWG) represents several local organizations, including TLA, Grass River Natural Area (GRNA), Elk-Skegemog Lakes Association (ESLA), Antrim Conservation District (ACD) and the Operator of Dams to install a pilot project of several log structures, LWD along the banks of the Grass River between Lake Bellaire and Clam Lake. This small-scale demonstration project is designed to do two things:

1) Determine if log structures can improve the aquatic habitat of a river heavy with sediment.
2) Determine if log structures along the riverbank can be a useful technique to improve navigability by deepening portions of the channel impacted by sediment built-up.

If successful, the log-structures technique could be applied to other sites throughout the Chain of Lakes.

What is LWD?

Natural wooden structures have been placed along the banks of rivers and creeks to improve aquatic habitat. Methods vary, but it means simply placing trees into a river. The trees then provide many types of aquatic habitat, just as if they had fallen into the river naturally. Whole trees or logs that are harvested close to the site where they will be installed, placed and anchored with some simple hardware. After just one year, it's difficult to identify these structures as man-made—they appear to be natural log jams.

In a creek or river with heavy deposits of sediment (most often from human activities), the technique can greatly improve the habitat for fish and their food sources. LWD can convert a river from a relative desert to a lively fishery. Trout Unlimited endorses the concept and has dedicated funding to LWD projects throughout North America.

How would LWD help navigation on Grass River?

These log structures will reflect some of the flowing water and cause subtle shifts in current direction and velocity. As a result, deeper pockets and channels will form as sediment is scoured from the riverbed around the structures. This should expose gravel beds as well, which will improve habitat.

The placement locations of the structures in Grass River are chosen to utilize this natural dynamic and move sediment out of shallow areas, which are impeding navigation. The LWD may reduce the sediment build-up, but it may not. Either way, we installed some excellent fish and fish food habitat.

How will we know if it works?

The project includes an important assessment process. We will be documenting the stream conditions before, during, and after installing the structures. By the spring of 2014, we should have a good idea of the effect of the LWD on the river. At that time, we will determine next steps, if any.

If the LWD deepens the Grass River channel, where will the sediment go?

The river naturally moves sediment downstream. If the LWD deepens the channel, displaced sediment will continue moving down stream. The LWD will be placed upstream from areas where there are relatively strong currents. For this project, we expect there will not be a noticeable amount of newly accumulated sediment in the river. One of the objectives of this project is to measure a "before" and "after" cross-sectional profile of the channel, at the location of and also downstream from the structures.

Are there parallel activities to reduce the amount of new sediment entering Grass River?

Yes, the research findings that prompted this project identified several opportunities to reduce the amount of new sediment entering Grass River each year. These opportunities include:

- installing rain gardens in stormwater runoff areas to reduce the amount of erosion that generates new sediment loading in Grass River;
- replacing under-sized & perched culvert road-stream crossings, and installing road-runoff diversion basins; and
- removing accumulated sediment from upstream installed sand traps.

Why do the project now? Is there really a problem?

There is not a significant navigation "crisis" in Grass River at this time. Nevertheless, concerns about the navigability our waterways has increased in recent years. The

issue is the second most common complaint raised by the public to the Drain Commissioner and Operator of Dams. Questions concerning water levels are the most common. These two issues are related, many believe the shallow waterways are due to low lake levels.

The root cause of shallow waterways is the accumulation of sediments. The sediments originate from a number of sources and build up in the channels, causing the waterways to widen and become shallow. The problem has been with us for a long time, and older residents recall that the channels were dredged and the spoils deposited on adjacent shores in what were often wetlands. It is now recognized that dredging can be harmful. It promotes river bank erosion and releases excessive amounts of nutrients into the water.

While Grass River is not the worst problem area, it is the best place to do a demonstration project because:

1) Sediment accumulation is well-documented and representative of the whole Chain of Lakes.
2) The necessary technical expertise to assess the project is already focused on Grass River through TLA and GRNA.
3) The interest of a group of civic-minded donors.

How will the project be organized?

The Antrim County Board of Commissioners (AC) has authorized the Operator

Please see LWD PROJECT on page 7

BOATING SAFELY & LEGALLY

It is that time of the year when many of us are getting our boats and personal water craft (PWC) ready for another fun summer season. As part of our preparation we should all focus on how to operate these vessels in a safe and legal manner.

Any person born after July 1, 1996, must have and carry a Boating Safety Certificate (BSC) to operate any boat with a motor greater than 6 horsepower. Any person born after December 31, 1978, must have and carry a BSC to operate any PWC. Links to boating safety classes and examinations are available on the Department of Natural Resources website found at www.michigan.gov/boating. The links are to either www.boat-ed.com/michigan or www.boaterexam.com/michigan. which offer a free course. If you wish to take the exam and get your BSC online you may pay their fee and do so.

Here is a sample of what you will learn from the boating safety course:

- Personal Floatation Devices (life jackets) must be U.S. Coast Guard approved.
- Personal Floatation Devices (PFD's) must be readily available to every person on a boat.
- PFD's must be the proper size and style for the person intending to use it.
- Children under 6 may not wear a Type III PFD while under way (must wear Type I or II).
- Everyone must wear a PFD while riding on or being towed behind a PWC.
- Inflatable PFD's are not legal when riding on or being towed behind a PWC.
- It is illegal to operate a PWC after sunset and until 8:00 in the morning.
- Each person in a canoe or kayak must possess a PFD – Type I, II, III, or IV (seat cushion).
- Vessels must be equipped with and exhibit navigation lights between sunset and sunrise.
- Navigation Rules of the Road and special considerations for Antrim County waterways.

If you prefer to study online and not pay to take the exam online, the Antrim County Sheriff's Office offers a free proctored exam. Registration is required. Register by calling the phone numbers listed below for the next scheduled classes, or by email at boatsmart-safelegal@charter.net:

- July 22nd at the Torch Lake Yacht Club, 10280 Larson Road off North East Torch Lake Drive; 248-770-5050
- July 27th at the Elk Rapids Police Department, 321 Bridge Street, Elk Rapids; 231-947-1619.

The Antrim County Marine Patrol has increased the enforcement of laws regarding operating boats when the operator is under the influence of drugs or alcohol. These are crimes. You should be aware that alcohol affects people much more out on the lake than it does ashore. Patrols are also watching for speeding boats (over 55 miles per hour) and excessively loud boats (over 90 decibels at idle speed).

The public is encouraged to call the Sheriff's Department at 231-533-8627 ext 0 with complaints regarding violations of the Marine Safety Act. The Department is attempting to keep boaters safe and legal on Antrim county's numerous lakes which is a daunting task. Citizen participation in this effort is greatly appreciated by the law enforcement community and will ultimately benefit all of us.

Short's 2 Short's Paddle Event: TLA's Safety Boat Assistance

On May 18th, 120 kayakers left Bellaire at about 8 AM embarking on a 27-mile paddling event to Elk Rapids. This was Short's Brewing Company's 4th annual event, and the 1st time that TLA and Elk Skegemog Lakes Association (ESLA) became actively involved by providing safety boats along the route along with land-based volunteers who tracked the progress of the kayakers. Thanks go out to Fred Sittel, Art Hoadley, Duane Drake, John Curtis, Mark Knight, Ed Gourley, and Becky Norris.

Although this was not a race, some of the very experienced in special racing kayaks completed the paddle in about 3 hours. Most of kayakers finished in 5 to 7 hours. The weather was perfect and everyone had fun.

The after party at Short's in Elk Rapids provided an opportunity for TLA to showcase some of their projects including the fish shelters project, Eurasian water milfoil management project, and the wish-list program for science teachers in local school public schools. We were very pleased with the kayaker's responses to TLA's programs aimed at protecting our lakes for future generations.

As an expression of appreciation for TLA's and ESLA's safety assistance, Short's Brewing Company presented both organizations with a check for $750.

Natural Lakeshore

continued

restoration. Various restoration tools will be incorporated into the design, such as erosion blankets, rocks, coir logs or blocks. Plants of different colors, fragrances, sizes and bloom times, as well as grasses, bushes and trees, are included in the design based on the homeowner's preferences, to achieve an attractive and naturally appealing look.

Next Issue: Plant Selection

New Members

Wilhelm Landscapes
Keller Williams - Lakeside Properties
Butch's Tackle and Marine

Help Us Match Dockside's Grant!

The Dockside Torch Lake has provided TLA with a challenge. They will ***MATCH*** **all donations to our** Science Education Outreach Program (SEOP) *up to $3000* ***each year*** **for the next 3 years. With your help we can continue funding the program at our current average of $10,000 each school year until a permanent funding mechanism can be found.**

The Three Lakes Association Science Education Outreach Program (SEOP) helps cultivate stewardship of the watershed in the hearts and minds of our young people- the next generation living within the watershed. Our strategy has been to work with science teachers and students in the Central Lake, Bellaire, Kalkaska, and Mancelona school districts.

By offering supplemental assistance to local science educators, we have enriched the environmental science curricula. Science teachers are invited annually to submit a grant application for equipment or experiences relevant to their grade level curriculum and state guidelines that enhance science instruction but are not within the budgetary means of their districts. TLA awards as many grants each year as its budget will allow. ***To date, we have provided almost $50,000 to our partner districts!***

In order to continue this program, we need your help. As our water quality and safety programs expand, our ability to sustain the current awards is in jeopardy.

- **$25 secures a subscription to National Geographic Kidsfor a 2nd grade classroom.**
- **$50 provides a Watershed Field Kit to a 5th grade class.**
- **$100 assures that a middle school biology class can dissect worms.**
- **$250 sends four classes to the Grass River Natural Area for a customized field trip experience.**
- **$500 outfits a high school biology class with 3 compound microscopes.**

The benefits of the program are great. Preparing our young people to be better stewards of our environment speaks for itself.

Take a moment and help us match Dockside Torch Lake's challenge to assure that the SEOP is funded for 2014 and beyond. You can now donate online on our website 3lakes.com/donate *or send us a check!*

LWD Project
continued

of Dams to manage the project. The Operator of Dams will utilize the WWG to assist. The permit from the MDEQ has been submitted with involvement from of the MDNR - Fisheries Division. Further the services of Mr. Ken Reed have been secured to assist. He has installed hundreds of these structures in northern Michigan waters.

How much will the project cost?

Cost is estimated at $3500. We have committed $500.

How can I get involved?

There will be many volunteer opportunities available. Please contact Dean Branson, TLA's representative to the WWG at 231-499-6497 or deanbranson@torchlake.com

Membership Counts!

BASIC *$50* ❑ **DONOR** *$100* ❑ **STEWARD** *$500* ❑

BENEFACTOR *$1,000* ❑ **LIFE** *$2,000* ❑

Michigan Riparian Magazine Subscription *add $10* ❑

TOTAL AMOUNT ENCLOSED: $_____

* * * * * * * * * * *

NAME: _____

SUMMER POSTAL ADDRESS: (Street, P.O. Box)_____

_____

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TOWN: _____ZIP:_____

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CITY: _____

STATE: _____ ZIP:_____

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EMAIL: _____

May we include your name in our newsletter donor list?

Yes ❑ No ❑

Are you interested in volunteering in any of the following areas?

❑ Water Quality ❑ HS Intern Program

❑ Water Safety ❑ Education

❑ Invasive Species ❑ Membership

❑ Finance ❑ Public Relations

❑ Service ❑ Other

Three Lakes Association is a 501(c)(3) corporation. Your dues and other contributions are tax deductible. Call for further information.

* * * * * * * * * * *

To join Three Lakes Association please return this form with your check to:

THREE LAKES ASSOCIATION
P.O. Box 689
Bellaire, MI 49615

Tuesday, August 13 – 5:00 pm
Alden Depot Park

"Chain-of-Lakes History Comes Alive - A Chat with Ed & Herb"

The fascinating history of our Elk River Chain-of-Lakes will come alive as you spend this summer evening enjoying a neighborly chat with Ed McDuffie and Herb Moir. Ed and his late wife Mary Kay are co-authors of Torch Lake: The History of Was-Wah-Go-Ning. Herb Moir, affectionately known as "The Chainsaw Guy", brings a lifetime of experience and stories. Whether it's about railroad expansion, logging, river diversions and dredging, surveyors and entrepreneurs, or Tar Lake; Ed and Herb will provide the detail and anecdotes so you get to know "the rest of the story." A wine and cheese reception will follow the program.

Co-sponsored by Grass River Natural Area, Three Lakes Association, Torch Lake Protection Alliance, Friends of Clam Lake and Intermediate Lake Association in partnership with Antrim Conservation District and Tip of the Mitt Watershed Council.

Membership Counts! **Please Join or Renew Today 3lakes.com/join-us**

Volunteer Opportunities **Contact Leslie at 231-350-7234 to volunteer**

Antrim County Fair, August 8-10, 2013 • Help with our TLA booth for an hour!

Three Lakes Association
P.O. Box 689
Bellaire, MI 49615
231-350-7234
www.3lakes.com

RETURN SERVICE REQUESTED