

TLA QUARTERLY

September 2004

President's Letter:

Summer is nearly over and I am completing my first of two years as your Three Lakes President. It has been both interesting and exciting. At our recent annual meeting several people stated that when approaching prospective Torch Lake members, the question arises; What is unique about Three Lakes Association? Aren't both lake associations the same? The following is a small sample of what we do.

- We are very involved in preserving our excellent water quality. We now are doing our own water quality testing and have just received a major grant of \$62,000 from MDEQ to build a computerized predictive water quality model to be used for decision making regarding our area's growth and it's affect on our lakes and streams.
- Recently TLA provided leadership to eradicate Eurasian watermilfoil from Butch's Marina and the Alden Harbor.
- We sponsor a boat-washing program at DNR launch sites that attempts to prevent invasive species from entering our waters.
- As a result of TLA's urging, Shanty Creek Resort will soon dredge the settling ponds next to M-88 to help prevent sand and silt from the Legend golf course run-off from entering Lake Bellaire.
- We are working with our sheriff regarding all phases of water and boating safety and continue to support the Star Buoy system.
- TLA is partnering with Grass River Natural Area and Torch Lake Protection Alliance to create educational programs for everyone in the community.
- We have a leading role in Antrim County United Through Ecology (ACUTE), a coalition dealing with the TCE plume approaching us from Mancelona.
- Working relationships have been established with area homeowners associations, schools, and businesses.

I hope this brief list of 'what we do' will assist you in explaining to others why it is important to become a member of Three Lakes Association. Increasing our membership is of paramount importance in order to be successful in achieving our many goals. Please help!

Dick Garcia

Summer Educational Efforts:

Three Lakes Association collaborated with the Grass River Natural Area, Torch Lake Protection Alliance, Antrim Conservation District and Tip of the Mitt on our summer educational efforts. The results were fantastic, with close to 100 people participating at each of two events. The first event was a 'tour' of Lake Bellaire on volunteer's pontoon boats to view the wide variety of shoreline protections utilized by residents. We provided

educational materials on native vegetation, a free sample native plant, and mingling pre and post tour to share wine, snacks and camaraderie. The second event was headlined by a demonstration of Ground water flows by Heather Wilson of the Antrim Conservation District. The rest of the event, titled 'In the Drink' had a series of displays, with experts hosting them on the surface and groundwater issues in our area. These included the TLA Predictive Water Quality Model for Torch Lake, Underwater Photography of Torch, Invasive Species (including samples), Boat Washing, Macro-invertebrates as water health indicators, and Status of the Groundwater Contaminant plumes from the Mancelona Area. We believe the success of these events was a result of having:

- An effective PR campaign consisting of press, radio, newsletter, and special mailings, led by the GRNA Education Coordinator, Melynda Bagley.
- Utilized the strengths of each organization in the bringing their special skills to the events.
- Focused on a few key issues, in pleasant surroundings.
- Shared issues, concerns and results together in a social atmosphere.

We plan on building on this success next year, and would welcome any of our members to join our team next year! Call Ray at 231-409-7034 if you are interested.

Torch Lake Predictive Water Quality Modeling Began This Summer!!

This summer Three Lakes Association got a major grant from the DEQ to build a predictive model of Torch Lake Water quality. The State portion of the funding was for \$62,000, Townships are matching with \$14,000, and in-kind donations of time and resources will add \$25,000. All of this money will be used to fund a computer modeling of the lake by 'Great Lakes Environmental Center' utilizing state of the art technology. Samples will be taken every month of the year to profile the lake over time. Full time Torch Lake resident Dean Branson, retired environmental biochemist from Dow and GE is the project leader. Results will start becoming useful and available in the fall of 2005. The goal is to have solid, predictable data, to help townships, business, and individuals make decisions based on the impact of proposed projects on lake water quality. Predictive models have traditionally been used to clean up seriously polluted lakes. The effort on Torch will be a trendsetter as we attempt to keep a pristine lake clean and healthy!

Some interesting water quality modeling facts:

- Water in the north basin of Torch Lake has a residence time of 35 years before flowing out at the south end.
- A third of the phosphorous in the lake comes from the atmosphere.
- Another third comes from streams and rivers.
- The remainder of the phosphorus comes from fertilizer, septics, and groundwater.
- It takes up to 1/3 mile of line to hold the testing boat steady on a GPS setting in a strong Torch Lake wind.
- The volume of Torch equals 114 billion cubic feet of water.
- Spencer Creek contributes more phosphorus to Torch than any other tributary.

We are continuing to learn more about our wonderful treasure. Stay tuned.

Conservation District Merits Membership Support on Fall Millage Request

The Antrim County Conservation District is a valuable ally in the protection of our lakes. They are the primary local agency working to prevent run-off from streams, construction sites, farms, and other sources of non-point pollution from entering our lakes. They also are aware of proposed work near, or in, our valuable wetlands. This maintains and preserves our watershed. Nearly every concern or complaint we receive is first investigated by contacting the Conservation District. They work closely with the MDEQ to coordinate efforts to insure appropriate laws are followed. Further, they have, on a priority basis, restored countless streams and erosion sites in the area using their own staff and prison resources. There is no doubt that Antrim County waters are cleaner for their efforts

Due to the State budgetary issues and a reduction in available grants, their funding level has been falling for several years. They have cut their budget as far as they can without reducing services to an unacceptable level. For this reason they have secured County Approval to place a .16 mill operating levy, for 2 years, on the ballot for this fall. I believe it is the best interest of our members, actually all residents, to support this levy to maintain this key water quality resource. I urge you to support this minimal amount as it appears on the November 2nd ballot, and to get an absentee ballot if you are not present.

For your information we have verified we can, as a 501(C)(3) qualified organization, advocate support for this type of issue if it furthers our organizational goals and minimal finances (less than \$500) are involved. The other constraint is to avoid supporting individual candidates.

Ray Ludwa

Treasury Department:

The good news is that Three Lakes is involved in a lot of new and exciting projects. The bad news is that we are dipping into our savings to carry them all out. As of July 31, we had spent approximately \$6,000 more than we took in with about 280 out of an expected 400 members paid up. The board approved this because they felt that our organization and our membership needed to advance in to some new areas and that support would come as we showed you what we were doing. This newsletter has the newest information on these projects. We have committed people and monetary resources to make this all happen.

One of the most exciting new projects is the Water Quality Studies Grant. However, not all the expenses are covered by the DEQ grant of \$62,000 that goes entirely to our subcontractor, Great Lakes Environmental Center (GLEC) in Traverse City. This grant money covers GLEC laboratory expenses and the development of a computer model of the phosphorus loading in Torch. Monies to cover our peer review last July and another in Nov. 2005, some test equipment, and Elk Rapids High School intern expenses will be

largely covered by grants from the Townships, but Three Lakes is putting some of its savings into this project as well. In particular we have purchased a piece of water test equipment to measure dissolved oxygen, pH, conductivity, and temperature down to the bottom of the lakes at a cost of \$4,600. And we have refurbished a stream flow meter we have had for some time. These items along with equipment borrowed from GLEC have allowed TLA volunteers to mount a comprehensive water quality monitoring program in a very short time. **But we need your help to afford these innovative and exciting programs.** After you have supported your political candidates in the coming election, please think about adding something to your membership contribution to Three Lakes Association. Please spread the word about us to your friends and neighbors. Ask them to become members, volunteers, and contributors.

One excellent way of contributing to TLA is through our endowment called the **Three Lakes Watershed Conservation Fund** managed by the Grand Traverse Regional Foundation. TLA's endowment contribution to the GTRCF has risen to \$34,000 mainly from life memberships. Because the stock market has been rising modestly, this contribution is now valued at about \$42,000, and this year we have taken out 5% of the market value to use for our ongoing projects. This will help, but we still need contributions to this fund. Remember that if you contribute \$400 to the **Three Lakes Watershed Conservation Fund**, \$200 can be deducted directly from your Michigan State taxes, and you can still take the regular Federal deduction. This means that for an outlay of about \$150 from you, the foundation receives \$400. The value of our endowment is relatively modest for an organization with as many activities as ours. We need to continued contributions to it to sustain TLA as development pressure strains our resources.

Our commitment to support an Educational Coordinator in partnership with the Torch Lake Protection Alliance and Grass River Natural Area has been covered this year by our Memorial Day golf outing. The funds from the golf proceeds are "restricted" and will only be used to support the coordinator. Similarly, our general education fund raised at last year's auction will only be spent on intern and other education projects. The last of our education programs, 'In the Drink', featured presentations on our two internship programs, our invasive species activities, the boat washing station, and our new water quality grant project. Please consider these presentation resources available to you as you advocate for us to your neighbors and friends. Three Lakes volunteers will be happy to make presentations and engage in discussions about our activities to any groups large or small.

On Walloon Lake 85% of the riparians belong to the lake association. We estimate that less than 15% of riparians on our lakes are members of Three Lakes. Get involved and get your friends and neighbors involved too.

Norton Bretz

Membership News:

As of September 7, 2004, TLA had 290 dues-paying members. Our membership goal for this year is 400 so clearly we still have much work ahead of us. Whether you are a riparian or not, water quality and other environmental issues are important to your use and enjoyment of this beautiful watershed. Three Lakes is working hard for you. Please help us continue our mission. **We need you, but you need us** working to preserve this watershed for all generations. If you are not a member please join us. If you have been a member, please renew your dues for 2004. The basic dues renewal for 2004 is \$50 and can be sent to TLA, P.O. Box 689, Bellaire, MI 49615.

Alan Hickman, Membership Chair

Grass River Natural Area Educational Coordinator's Letter:

Dear Lake Friends,

This spring I was hired by Grass River Natural Area to be its education coordinator. Three Lakes Association and Torch Lake Protection Alliance supported the creation of this new position with generous grants. So first, I'd like to say, "Thank you very much!"

My husband Bob and I moved to Bellaire full-time two years ago after vacationing here for ten years. Our neighbors, Nancy and Ray Ludwa, immediately recruited us to volunteer for TLA and Bob currently serves on your board. I applied for the education coordinator position because it was an opportunity to use my experience in the nonprofit sector. My experience includes work in educational and child development research, volunteer training, advocacy and public relations. Most recently I was the Executive Director of the Licking County Foundation, a community foundation located in Newark, Ohio.

The missions of TLPA, TLA and GRNA have protection as a common theme—protection of a lake, a chain of lakes, a watershed. All three organizations put a high priority on education as a means to helping their members and the public understand how fragile these resources are and what they must do to protect them for future generations.

This summer TLA, TLPA and GRNA sponsored two very successful educational events about shoreline stewardship and water quality. As Education Coordinator, my goal is to facilitate the expansion of these kinds of programs. I will be working with your boards and staff to develop cooperative programs that reach all constituencies in our community.

I sincerely appreciate all the help I have received from GRNA, TLA and TLPA board members and staff to orient me in my new position. I've been energized by the dedication of all of our volunteers, excited by the enthusiasm and creativity of the naturalists, and inspired by the joy of children and adults as they experience the natural world. I look

forward to working with all of you to develop a comprehensive education program that furthers the missions of all three organizations.

Sincerely yours,

Melynda Bagley

Publicity Report:

As TLA's projects and activities grow, and membership increases, an ongoing publicity program is being planned to keep our members informed and to make TLA visible to the community. Our goal is to keep area media; newspapers, radio, and television informed about our progress in providing leadership to protect the priceless heritage of our waters. Recent publicity includes news stories in area newspapers and a major interview of four officers and board members of TLA in the Traverse City Record Eagle.

Plans are to develop a regular media list and to set up interviews with major area radio and television stations. Contact has been made with Traverse Magazine and with the media-relations director of the Traverse City Convention and Visitors Bureau.

Our objective is to follow this definition of PR;” Public Relations is doing good and getting credit for it”.

George Bushnell, Publicity Chair

Executive Director's Corner:

We have successfully completed our first session of the Cooperative Lakes Monitoring Program offered by the Michigan Lake and Streams Association in cooperation with MSU and the DEQ. Duane Drake and his volunteer lake monitors spent close to 100 hours collecting data and samples from our three lakes from May through September and have forwarded that information to MSU and the DEQ. We will receive the lake status reports by the first of the year. We owe our volunteers a big thank you for their commitment and service.

Our Bellaire High School summer interns have just completed a massive shoreline algal survey of our three lakes. Sarah Conkle, Brienne Lunn, and Jocelyn Menestrina contributed a total of 200 hours to kayak 62 miles, collect and analyze 114 algal samples, locate and identify 69 properties (45 on Torch, 11 on Clam, and 13 on Bellaire) with significant algal growths, and help prepare a final report. Without their help we would have been unable to complete this project in one summer. They are to be commended for their hard work and dedication. The final report will be posted on our website, www.3lakes.com and will be available at the TLA office, 106 Depot St. after the October 13 school board presentation.

The Next Invasive Species?

Introduced into North American waters from the Caspian Sea in the late 1980's, a

presumptive quagga mussel (*Dreissena bugensis*) was found on July 9, 2004 by children playing at the north end of Torch Lake. We are waiting positive identification from Mark Breederland, District Sea Grant Extension Agent. Earlier in the same week, the MDNR reported that there were none in any inland lakes, though there were several distinct populations of them in different parts of the Great Lakes, individually distinguishable from each other through DNA analysis. More destructive than its cousin-species the zebra mussel (*Dreissena polymorpha*), the quagga can live at water depths and temperatures that the zebra cannot tolerate, from the warm shallows to 400 feet down. Unlike the zebra that has a dormant period during the winter months, the quagga is active, siphoning nutrients from the water all year long. The quagga attaches to, but does not need, hard surfaces like metal structures, but does well on silty and sandy lake bottoms. Finally, it excretes large amounts of phosphorus, promoting excessive weed growth and algal blooms, as well as concentrated toxins, poisonous for many fish and their young.

The quagga varies in size from barely visible to 2.4 inches long, typically the size of a fingernail. Shell height is about 9/10s of the shell length. Background color ranges from light tan to dirty white, with curved vertical stripes of dark brown to black. Its handiest field characteristic is that the quagga, set upright on a flat surface, will topple over because of its curved underside; whereas the zebra in the same position remains firmly upright. Good identification pictures can be seen at:

<http://nas.er.usgs.gov/queries/SpFactSheet.asp?speciesID=95>

While there is hope for a future remedy for the zebra and quagga invasions, in the interim the observant private individual can do these useful things:

- Report any suspected sightings to the Three Lakes Association (231-533-4852), preserving samples for firm identification,
- Wash boats and trailers carefully before transferring them from any water body to another,
- Urge your legislators to produce meaningful legislation ending the uncontrolled dumping of foreign ballast water into the Great Lakes, source of the major threats to our aquatic environment.

Jack Norris, Director Emeritus

Boat Washing Program

After that last article about new invasive species our boat-washing program may sound somewhat futile. Isn't it a case of too little too late? After all, we already have zebra mussels and now possibly the quagga mussel? When asked these questions, Bob Bagley, who lead the boat-washing team this summer replied, "The intent of the boat-washing effort is to educate boaters about simple methods they can use to help stop the spread of aquatic invasives. The actual washing of a few boats will not have a major impact on the problem but reminding a 100 people of their responsibilities when using our lakes can

pay off.” Bob and his team contributed 50 prime time hours for this summer’s program and we thank them for their dedication to this effort.

2004 Annual Meeting

Our 2004 annual meeting was held on August 27 at the Bellaire Senior Center. After a brief business meeting and election of 2005 officers (same slate as 2004) we heard a speaker from the Munson Health Care System talk about the struggles of a 501(C)(3), hospital organization. We certainly can empathize with that struggle. The room was loaded with displays of Water Quality Model apparatus, summer program information, photos from our website photo gallery, and Norton Bretz’s underwater TV camera. The new 2004-05 Membership Directory was distributed to all attendees. We will be sending the directory to all members who have renewed their dues for 2004. It’s not too late to renew your 2004 dues to help support our many programs and, in addition, receive a copy of the coveted membership directory.

TCE Plume Update:

The DEQ has released the results of the latest round of monitoring well drilling and sampling. New monitoring wells have been drilled at 15 sites in an effort to accurately characterize the plumes dimensions and concentrations. Continuous core samples have been collected and will be used for bench scale testing of various remediation technologies. TCE concentrations in groundwater samples collected from the monitoring well at the corner of M-88 and Schuss Mountain Rd. continue to increase and are now at 200 ppb. The EPA standard for drinking water is a maximum of 5ppb and for surface water, 200ppb. The plume continues to advance at about 75-100 feet/yr.

At the last ACUTE meeting we heard about two exciting remediation technologies from the professors who pioneered them. Dr. Mike Dybus from MSU presented his bioremediation technique for removal of TCE. Special bacteria can digest TCE leaving harmless byproducts. These bacteria can only live in anoxic environments and will not be able to grow anywhere but underground where suitable conditions exist. Dr.Zhaing from Lehigh University presented his technique of injecting nano-scale iron particles into the TCE plume. Iron removes the chlorine from TCE rendering it harmless. The MDEQ attended the meeting and will consider these new techniques as well as others in formulating a final plan of action.

Signs of Fall?

- Canada geese are gathering in small flights, building stamina for their long migration, and learning to spell ‘V’ again.
- Coyotes are howling at the Harvest Moon or calling for mates.
- Pumpkins are turning bright orange in the pumpkin patch by the barn.
- Maples are turning embarrassed red.
- Apple tree branches are bending with their scarlet burden