TLA Quarterly

OCTOBER 2011

President's Letter

I am dedicating this issue of our Quarterly Newsletter to Three Lakes Association's terrific group of volunteers, as an expression of our appreciation. As you read the articles in this issue of our Quarterly Newsletter, please notice the wide range of things being accomplished as a result of our volunteer's time and talents, including TLA members who…

- Collected the water samples and reported the E. coli monitoring results,
- Worked with our summer interns every Friday morning to study sedimentation in Grass River from Shanty, Cold, and Finch Creeks
- Strived to remove Eurasian watermilfoil from Torch Lake, washed boats
- Organized a special 45th Annual Meeting, with DNR Director, Rodney Stokes
- Measured water clarity and collected water quality sample, four sites
- Enabled local science teachers to improve their environmental curriculum
- Catalyzed the process of planning and installing fish shelters
- Posted and "liked" photos on Three Lakes Association's new Facebook page
- Encouraged TLA membership, prepared monthly meeting minutes, treasurer's report, and quarterly newsletters
- Advocated for township-based water quality protection initiatives

We understand that for some new members of TLA, the process of becoming a TLA volunteer may be a little mysterious, unless someone first invites you to participate in a specific activity. Please do not be daunted by the process…just make a phone call to any TLA Board member. Some of the volunteer's activities only take a few hours of time, such as making hors d'oeuvres for our twice-a-year Joint Education Events, or flying summer interns over Shanty Creek & Grass River to take aerial photos of areas of concern. Other opportunities for volunteers, such as working with summer interns, usually take more time. Volunteers are always welcome. Right now our wish list for new volunteers includes someone to help oversee TLA publicity, which could include improving our Website and writing articles about successful projects. Someone to help prepare grant applications and to coordinate volunteers is also needed.

We are delighted with the progress being made by a relatively new umbrella group to help coordinate the implementation of collaborative projects to benefit the Elk River Chain of Lakes. The Watershed Center and Tip of the Mitt are coordinating the collaboration of several projects, including (1) the ongoing assessments of sedimentation in Grass and Rapid Rivers, (2) possible installation of fish shelters in several lakes in the Chain, and (3) a township-by-township critique of existing water quality-protection ordinances compared to ordinances known to protect water quality. This umbrella group has scheduled a special meeting with representatives from local units of government on November 9th to explore opportunities for partnering to accomplish mutually agreeable water-quality protection objectives.

Please let us know if you would like to help,

Dean Branson, President

In this issue

E Scow Association National Championship 2011 on Torch Lake
by Todd Collins
Page 2

2011 TLA membership
by Todd Collins
Page 2

TLA Launches its 4th Science Education Outreach Program
by Patricia Roush
Page 3

A Peek into the History of TLA
by Tina Fields
Page 3

E. coli 2011 Stream and Beach Monitoring
by Becky Norris
Page 4

Summer Interns' Project, Grass River Tributaries, Restoration Opportunities
by Dean Branson, Becky Norris, and Gary Knapp
Page 5

TLA & GRNA Golf Tournament sponsors
Page 5

Fish Shelter Project
by Bob Kingon, President, Elk-Skegemog Lakes Association
Page 6

Eurasian Watermilfoil in Torch Lake: Update
by Dean Branson and Norton Bretz
Page 6

More Good News
by Jack Norris
Page 7

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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E Scow Association National Championship 2011 on Torch Lake

by Todd Collins

Torch Lake Yacht and Country Club hosted the 2011 E-Scow Association National Championship Races on Torch Lake Sept. 9 to 11. Seventy-nine boats participated in the race over three days, and the weather was spectacular. E scows sailboats have flat bottoms, are at least 28 feet long and six feet wide.

In an effort to prevent invasive species from entering the lake Three Lakes Association helped with the washing of each boat trailer before they entered the water. Congratulations to the Yacht Club for a spectacular event.

TLA Board Member, Vicky Avery, washing an E Scow trailer

E Scows competing on Torch Lake

2011 TLA membership

by Todd Collins

Three Lakes Association is proud to welcome new members Katherine Yih, Jack Spence, and Bob and Priscilla Bake since July. This brings our total membership to 492 as of October 1.

TLA Launches its 4th Science Education Outreach Program

by Patricia Roush, TLA Education Committee Chairman

School budgets for the four school districts within TLA's watersheds continue to be so strained that science teachers do not have sufficient teaching supplies and tools to effectively teach their environmental science curriculum. The four school districts are Central Lake, Bellaire, Mancelona, and Kalkaska with approximately 2,500 students in grades K-12. Since 2008 TLA has awarded $32,000 in Science Education Outreach grants to the science teachers in response to their Wish List of specific items, such as…

- 93 pieces of science equipment
- 22 science kits
- 18 class field trips to places like Grass River Natural Area
- 12 class Excursions on the Inland Seas Schoolship
- Dozens of subscriptions for student science publications and teacher's memberships in professional science educator organizations.

In September 2011, TLA launched its 4th year of this Program by delivering Wish-List packets of instructions to about 90 science teachers and their principals. We anticipate receiving several dozen requests for Wish List items in November, and then, after some deliberation about our available funds relative to the requested Wish-List items that appear to mirror our interest in protecting water quality within the watershed, grants will be awarded for select Wish-List items.

We have always encouraged/required those teachers who receive grants to provide specific feedback on how the science items they received benefits their student's science education. For 2012, we are adding a new option for teachers and students to communicate their feedback. We are encouraging them to post photos and short narratives on the dedicated photo album on TLA's Facebook page.

Sixth grade students from Bellaire

To access these photos and narratives, one can go to "Facebook" and then type "Three Lakes Association" in the Search box, or click on the Facebook button on TLA's Website (www.3lakes.com).

This TLA Program is part of an ongoing partnership with these four school districts to achieve a portion of our Mission, i.e. to cultivate an understanding and appreciation of environmental science within the hearts and minds of the next generation of environmental stewards in this area. These young people can become future members of school boards, township and county decision makers, tax payers, voters, and volunteers.

A Peek into the History of TLA

by Tina Fields

At our annual meeting, July 21, 2011, we celebrated TLA's 45-year history. Here are a couple of events that were highlighted in the video presentation of that evening.

In 1997 we posted boat safety law signs at 18 different sites on our three lakes. These signs alerted boaters to the rule that calls for slow speed and no wake within 100 feet of a dock, shoreline, or legally moored swim-raft. The TLA 'Star Buoy' was featured on these signs. The 'Star Buoy,' when properly placed, indicates a measured distance of no more than 100 feet from the shore, dock, or swim-raft. This provides boaters with a convenient marker and makes it easier for the Marine Patrol to enforce this critical boating safety law. This year, TLA once again made sure the boating safety signs were posted, revising the sign language to meet the current law, and replacing any missing or damaged signs. We owe our thanks to John "Jinks" Ross for the inspiration and the work of placing the original signs in 1997, and to Bob Bagley for bringing them all up-to-date this year. Great work!

In 2003, the TLA summer internship program began. In that first year, interns Sarah Conkle, Jessi Dewey, Savannah Bryant, Nathan Graham, and Brianne Lunn, conducted an E. coli survey of five beaches, under the guidance of Norton Bretz and then Executive Director Timothy Hannert. TLA's summer internship program has grown over the past eight years, with participating high school students from Elk Rapids, Bellaire, Central Lake, Ellsworth, Mancelona, and Kalkaska. Some of our original interns are now actively involved in environmental science pursuits, academically and/or professionally.

E. coli 2011 Stream and Beach Monitoring

by Becky Norris

This past summer we did stream monitoring twice, July 5 and August 8. We also did a side-by-side comparison with the Health Department of E. coli results at three beaches on Torch Lake, the DNR launch at Torch River Bridge, the Day Park in Torch Lake Village, and the DNR launch at Eastport Landing. The volunteers who participated this summer were Marilyn Bagdonas, Gary Bokerman, Mark Knight, Bob McClelland, Trish Narwold, Becky Norris, and Paul Roush. As in the past, most of the E. coli results have been well within the safe levels. Occasional transient elevations were seen this summer as they have been in the past.

The beach comparison demonstrated both safe levels of E. coli and good agreement between the Health Department's lab and the SOS Analytical lab Three Lakes Association typically uses. The Health Department has been evaluating a more rapid E. coli analytical methodology. We anticipate collaborating with the Health Department with split samples to be analyzed by the different laboratories and different methodologies when they are satisfied that the rapid procedure is ready to be put into use.

One of the streams that have shown episodic E. coli elevations is Wilkinson Creek, on the east side of Torch Lake near the north end. There was a strong storm event on August 9. Passing along North East Torch Lake Drive that afternoon following the heavy rain, I noticed a remarkable dark brown discoloration of the lake water extending at least 600 feet to the south and at least 200 feet out into the lake from the mouth of Wilkinson Creek. The creek was brown and turbid as far upstream as M-88 and only slightly discolored at Bunker Hill Road. A sample of the lake water, once settled, left dark brown silt and decaying vegetable matter on the bottom of the jar. No E. coli count was done because a sample could not be delivered to the laboratory within the allowable holding time. Had we measured E. coli, the count would in all probability have been very high due to washing out of the bacteria from the stream bed sediment. While this storm event provided rather dramatic visual evidence of pollution of the water, frequent much more minor disturbances do occur, such as a frog or turtle stirring up the stream bed. And these events will give us transient high readings if our sample happens to be collected when that disturbance is still present in the water column. The high readings that deserve further investigation are the ones where they persist sampling time after sampling time.

E. coli monitoring results (colonies/100 ml): Tributaries, August 8, 2011.

E. coli Beach Monitoring Results (colonies/100 ml): July 18, 2011

Torch Lake Beaches	SOS Lab Traverse City	Health Dept. Lab Gaylord
1. Eastport Boat Launch:	Colonies/ 100 ml**	Colonies/ 100 ml
Left side*	186	114
Center	172	145
Right side	173	117
2. Torch Bridge Boat Launch:		
Left side	58	27
Center	48	37
Right side	30	44
3. Torch Lake Twp Day Park:		
Left side	2	15
Center	0	2
Right side	0	<1

** As viewed from shore*

*** 300 colonies/100 ml = highest allowable level for swimming (full-body emersion)*

E. coli Tributary Monitoring Results (colonies/100 ml): August 8, 2011

Location	8/8/2011*	7/5/2011*	2010 Range	2009 Range
Spencer @ Alden Harbor	99	88	96 - 483	51 - 119
Torch Lake @ Torch River, DNR Launch	9	3	1 - 79	0 - 4
Creek @ 10407 SWTLD	--	--	87 - 548	23 - 31
Powell @ 7056 NWTLD	--	--	144-1300	30 - 548
Creek @ 6187 NWTLD	126	15	150 - 313	--
Creek @ 6049 NWTLD	**613**	**326**	111-1046	88-308
Creek @ 5843 NWTLD	142	**303**	58 - 579	35-179
Eastport @ M-88	**579**	68	214- 1046	210-1414
Wilkinson N of 4358 NETLD	228	162	135- 1553	77-147
Do-Di-Ah-Da @ 4054 NETLD	218	190	101- 2419	19-67
Bennett @ 3487 NETLD	96	**461**	36 - 687	32-58
Wolgamott @ 3296 NETLD	--	--	96-345	38-91
Meggison S of 3028 NETLD	248	31	144-727	36-365
Krause @ 253 NETLD	9	62	49 - 308	23-38
Clam River @ Butch's	10	12	9 - 26	--
Intermediate River @ Bellaire Hwy	96	93	32 - 113	--
Cedar @Schuss Mt Rd	16	7	17 - 40	7-11
Shanty @ M-88	19	17	9 - 37	12-48
Grass River @ Grass River Rd	6	202	19 - 155	--
Cold @ Tyler Rd	36	20	12 - 35	14-15

** Locations where E. coli values exceed 300 colonies/100 ml are candidates for ' re-sampling and possibly follow-up investigations for sources of E. coli.*

-- Location not sampled

Summer Interns' Project, Grass River Tributaries, Restoration Opportunities

by Dean Branson, Becky Norris, and Gary Knapp

Each Friday morning this past summer our interns engaged in field work characterizing Shanty Creek, Cold Creek, and Finch Creek in search of potential sources of sediment/sand accumulating in Grass River. This was TLA's eighth year for conducting a summer internship program. Since 2003, a total of 40 talented high school students from area high schools have successfully completed the requirements of this program, which include 60 hours of community service time plus preparing a report which earns them a half credit of independent environmental studies on their transcript. The interns also receive a small scholarship, thanks in part to the Grand Traverse Regional Community Foundation. This scholarship is in recognition of their successful completion of this internship program

A special thank you to TLA's volunteers, including Fred Sittel, Trish Narwold, Norton Bretz, and the authors of this article who worked with our interns in their field work. Others who helped mentor our interns were Paul Richards (a professor of hydrogeology in Brockport, NY), Braden Ackerman (U of M student), Jim Kelderhouse (NMC student and Grass River Natural Area intern), and Jim Argo (local pilot who flew the interns over the area to obtain aerial photographs). Together we…

- Identified several under-sized culverts; some of the 24 road-stream crossings
- Documented fish passage barriers, including two dams on Shanty Creek and a number of culverts with significantly perched outlets
- Characterized stormwater erosion sites
- Measured stream flow rates
- Installed four temperature-logging devices
- Determined the macroinvertebrate populations (aquatic insects).

The findings from this summer's field work will help frame TLA's future advocacy for restoration opportunities for Grass River and its three tributaries in partnership with Grass River Natural Area. These restoration opportunities may include (1) working with Shanty Creek Resort and the Antrim County Conservation District to develop a stormwater management plan; (2) working with the County's Department of Transportation to develop standards for sizing culverts for road-stream crossings to handle anticipated storm events; and (3) working with the Watershed Center Grand Traverse Bay, Trout Unlimited, and others to explore the feasibility of removing the small dams from Shanty Creek. We may also explore the feasibility of optimizing the flushing of accumulated sediment/sand from Grass River by slightly adjusting lake levels.

TLA's 2011 summer interns were as follows:

- Roger Barber, Kalkaska High School
- Carrick Conway, Central Lake High School
- David Witt, Central Lake High School
- Erik Youmans, Central Lake High School

These interns will present a summary of the findings from this project to TLA's Board of Directors on October 11th, and to their respective school boards at one of their future meetings. A written report will be posted on TLA's Website.

Three Lakes Interns (r to l): Roger Barber, Carrick Conway, Erik Youmans, and David Witt

Duane Drake and Dean Branson installing a water level meter on Lake Bellaire

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These sponsors raised over $4,000 for the educational programs of each organization. **THANK YOU!**

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Fish Shelter Project

by Bob Kingon, President, Elk-Skegemog Lakes Association

Many fishermen who were active in the Chain of Lakes in the '70s and '80s will recall that most lake associations placed fish shelters in area lakes to create fish habitats. The shelters were effective in attracting both fish and fishermen. It was a major volunteer effort on the part of many to build the structures, float them out and sink them. Some remnants still remain. In the '90s, the Michigan Department of Natural Resources (MDNR) discouraged the practice and the lake associations in northern Michigan complied. In 2005 the MDNR changed its position and issued guidelines for "Artificial Structures for Inland Lakes".

The Hubbard Lake Sportsman and Improvement Association has been installing fish shelters (with permits issued by the Michigan Department of Environmental Quality; MDEQ) at the rate of 50 a year for the last few years. Their shelters are 4' x 4' x 4' box construction using cedar planks. Each shelter is filled with evergreen brush and 300 pounds of fieldstone for weight. The shelters are loaded onto a pontoon barge (then stone added) and placed at 20' depths around the Lake. The cost for 50 shelters is approximately $2,700, excluding 290 hours of volunteer labor. Divers in Hubbard Lake have observed large schools of perch, bass, forage fish, walleye and northern pike in and around the fish shelters.

Fish shelters ready for positioning, Hubbard Lake Association

Recently the Lake Charlevoix Association received a MDEQ permit to install fish shelters. According the project leader, "Many parts of Lake Charlevoix are nearly devoid of the natural structure, which is so important to fish spawning and survival. Our project aims to improve the overall health of the fishery in Lake Charlevoix and improve angler success."

On September 1st, fishermen from the Elk River Chain of Lake (ERCOL) met to coordinate the preparation and submission of a joint application to MDEQ for the installation of fish shelters. The project initially seeks to deploy fish habitat structures at approximately a half dozen locations on each of six lakes on the Chain; Intermediate, Bellaire, Clam, Torch, Skegemog and Elk. Additional deployments as well as a shallow water program for near shore habitat improvement could be pursued after evaluation of the initial effort.

A Steering Committee was formed. The members are Steve Young, Bob Bagley, Adam Jankowski and Larry Schwab. The Watershed Center Grand Traverse Bay may be the official submitter of the permit application, in part because they were the authors of the Grand Traverse Bay Watershed Protection Plan. One of its goals of this EPA and MDEQ-approved Plan is to enhance the recreational opportunities with an objective of maintaining sport fishing quality and fish habitat throughout the watershed. A target date of March 1, 2012 was chosen for submitting the joint permit application to MDEQ.

For the permit application to be approved, written permission from three riparian property owners are required for each shelter placement. As the ERCOL fishery committee identifies potential sites for shelter placement, they will contact the owner of the property front of the proposed shelter and the two adjacent property owners.

Eurasian Watermilfoil in Torch Lake: Update

by Dean Branson and Norton Bretz

We were optimistic about the removal of the pioneering colonies of Eurasian watermilfoil from Torch Lake until we inspected the two sites where the divers hand dug and suction removed whole plants from the lake bottomland on June 28 & 29th. Aquacleaner Inc. (also now known as "Naturally"), returned to Alden Harbor on July 27th and 28th for no additional cost and removed an additional 30 bags of hand dug plants.

Although Aquacleaner's divers ran out of time to return to the Stony Point site to remove a small patch missed in June, two TLA volunteers hand dug and removed most of the E. milfoil plants missed in June from the Stony Point site. An important observation from these volunteers was that hand digging and completely removing the roots of E. milfoil plants in the rocky-clay bottomland is more difficult than originally thought. Another observation is that the hand digging process results in more floating fragments than anticipated. Both of these concerns could result in further propagation of this aggressive invasive aquatic weed.

We have questions about the effectiveness of this hand digging and suction removal technique for removing E. milfoil from Torch Lake. Our plan, at this point in time, is to comprehensively survey the two sites next summer and then re-evaluate the pros and cons of the options for effectively removing E. milfoil from Torch Lake.

More Good News

by Jack Norris

Vickie Avery and Bob Bagley shared with me the contents of a little plastic baggie at the annual meeting, asking "What's that thing?" – referring to something about the size and appearance of an undernourished English muffin with a slight greenish cast.

The first thing that came to mind was a freshwater sponge, but when I felt it with fingertips, there was a scratchiness that seemed quite un-sponge-like, so I turned to the experts in the DNR Fisheries Division, got referred to an expert in Michigan State, who, it turns out, had retired.

Thank our lucky stars for Google and its immense gaggle of scientific stuff !!

The mystery object turns out to be a freshwater sponge, after all -- eunapius fragilis, the most widespread species of fresh water sponge. Then, why didn't it feel like a sponge to the exploring fingers? Because they didn't know then what they know now: of the several thousand species of sponge in the world – almost all of them saltwater sponges – only two have the soft, comfortable feel that we think of as spongy; all the rest of them have stiff prickly spicules ranging from microscopic to toothpick size. So what we presume to be the norm is, in fact, simply the rarity we're accustomed to. (How much of what we "know" suffers this same flaw?)

There are fewer species of freshwater sponges. An early writer held out for 150; a later expert, after studious reshuffling, settled for 30.

The freshwater sponges are quite sensitive to pollution, and the fact that they are doing well along the shores of Lake Bellaire means that the water there is relatively clean. And that's good news. (The canary in the mine comes to mind.)

Freshwater sponge – eunapius fragilis,

membership counts!

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* * * * * * * * * * *

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The Mission of the Three Lakes Association is to provide leadership to preserve, protect, and improve the environmental quality of the chain of lakes watershed for all generations.

October 2011 issue of the TLA Quarterly

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