



# QUARTERLY

THREE LAKES ASSOCIATION

SERVING LAKE BELLAIRE, CLAM LAKE AND TORCH LAKE IN ANTRIM COUNTY, MICHIGAN

APRIL 2017

## Fish Shelters; five year project successfully completed!

By Fred Sittel

It started on a winter morning five years ago at Darlene's restaurant in East Jordan with a meeting between Three Lakes Association and fishermen from Lake Charlevoix. The subject was placing piles of brush, called fish shelters, at otherwise barren locations on a lake bottom to attract fish and improve aquatic habitat. TLA was interested in putting together a permit application for shelters at many locations and in multiple lakes as a single project. Lake Charlevoix Association had submitted an application for shelters at multiple locations around their lake and the group reviewed feedback they got from the Department of Environmental Quality which issues the permits. The discussion at the restaurant led to a request for a planning meeting with DEQ and a fisheries division biologist before submitting an application. The planning meeting defined which construction materials were favored and the number of locations suitable for different lakes of the Elk River Chain. It also established that riparian property owner permission



would be required before a permit could be issued. A literature search was started. Ideas came in from many sources and included fish shelter designs which went beyond simple weighted piles of brush. A conversation with a local business owner about his Torch Lake bottomlands revealed that in 1977, a Masters Degree student from CMU named Bruce Pelletier collaborated with the DNR to study a variety of fish shelter designs that were tested in Torch Lake and Lake Bellaire. Bruce and fellow divers spent a summer conducting the study which resulted in a thesis paper. One conclusion was that multiple warm water species rapidly colonized all shelter designs within days or hours. A second



was that species diversity and the overall number of fish were greatest around shelters made of dense clusters of hardwood. A search on the internet led to contact with Bruce, who now

lives in the Ludington area. He decided to make a return visit to the chain of lakes area and meet the fish shelter team at an event cosponsored by TLA in the  
*See FISH SHELTERS page 3*

### Sneak peek

PRESIDENT'S MESSAGE	PAGE 2
SEPTIC SYSTEM	PAGE 5
WATERSHED STEWARDSHIP	PAGE 7
BOATER SAFETY CLASS	PAGE 8



# THREE LAKES ASSOCIATION

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The TLA Quarterly is published by the Three Lakes Association  
Please direct comments or questions to:  
231-544-7221  
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## President's Message

# Such sweet sorrow

Just about six years ago, a new colleague came into my professional and volunteer life, and promptly became a friend in my personal life.

We are not required to be friends with our workplace colleagues, although it does make the working environment ever so much more pleasant if we do manage to be friends. I strive to be friends with my colleagues, and most of the time that striving is successful. In the case of Leslie Meyers, I never had to try – the friendship just seemed to have a life of its own.

In the late fall of 2011, Leslie Meyers accepted the position of Executive Director for the Three Lakes Association. She came on board, bringing to the position her nearly boundless energy and passion for improving the quality of life in her community, her rather astonishing frugality and her knack for getting needed services and supplies at very little cost, her ability to socially “work a room” and develop an extensive interpersonal network, her professional knowledge of township and county government, and her strong sense of organizational order.

At first, she often commented that she wasn't a “scientist,” and that she would work to learn the science of TLA's mission to protect the health and quality of our waterways. Over time, she came to understand that being a scientist simply means adhering to the scientific method of discovery and experimentation to explore our environment, and seek answers to the puzzles we encounter. One does not need a degree in chemistry, biology, or physics – or any of the other scientific disciplines – to be a scientist; and, TLA is fortunate enough to

have several of such professional scientists among its members and serving on its board.

What we had been short on were the very “people skills” that Leslie embodied. As the public “face” of the organization, Leslie was the nearly ideal person. She brought a warmth and easy camaraderie to the relationships of TLA and other entities, whether sister environmental associations, or chambers of commerce, or local units of government.

Now, after nearly six years, Leslie has determined that it is time for her to retire from her position as the Executive Director of the Three Lakes Association. This is where I am reminded of the essential truth that every blessing carries a burden and every burden offers a blessing. For me, personally – and I know I am not alone in this – the burden associated with the blessing of having Leslie as a friend and colleague is that the time has come to bid her farewell, at least professionally. I will miss her steadfast support in all the day-to-day operations of TLA.

The burden of Leslie's leaving, is softened by the realization that the Executive Committee will soon be interviewing two very strong candidates to become the next Executive Director. So, the blessing and burden wisdom holds true.

As always, I close with my customary plea that if you value the mission of TLA, you will become a volunteer, helping with any of our ongoing projects. Just call us (231-544-7221), or email us ([info@3lakes.com](mailto:info@3lakes.com)); or visit our website ([www.3lakes.com](http://www.3lakes.com)). There is room for you, no matter what your skill level is.

Tina



Todd & Jennifer Stone – Life Membership  
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H Arthur & Catherine Brereton  
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Steward Membership - \$500  
Bethany Hawkins

Memorial for Rose Schuster - \$1000

# Fish Shelter *continued from page 1*

spring of 2012.

The extensive planning resulted in a decision to fabricate shelters made of hardwoods and place them on each of five lakes of the chain, Intermediate, Bellaire, Clam, Torch and Elk. Fabricating shelters is more time consuming than using weighted piles of brush but they would be more durable and provide greater cover. TLA collaborated with six other area organizations which had already been working together as members of the Watershed Protection Plan Implementation Team. A fish shelter project was a natural fit for this group because the Elk River Chain is located in the largest watershed to the Grand Traverse Bay and the official bay protection plan calls for aquatic habitat improvement. Lake associations from Intermediate, Clam and Elk Lakes joined TLA to draft coordinated permit applications for each lake. The applications would be presented to DEQ with one organization, The Watershed Center Grand Traverse Bay, as the requesting permit holder. The first step was to get permission from riparian property owners. Many private property owners came forward but the project could not have been advanced as quickly without help from the various Townships and the DNR, which gave permission at road ends and access sites under their jurisdiction. A permit was approved by DEQ in June 2012 which allowed for groups of two to three shelters located at over 80 sites on the five lakes and provided a period of five years for completion. The effort was embraced enthusiastically by volunteers, fishermen, property owners, local businesses and the community. Funding was provided by TLA, other area lake associations and by donations of both money and materials from area residents and businesses.

Once permits were issued the hard work really began. The shelter designs consisted



of a four foot hardwood crate filled with dense brush and natural stone ballast and a five foot hardwood “tree” made of slab wood boards supported by a wood post set in concrete. Initially, tree stumps with root balls were also used. Shelters started going in the water in June, 2012. The GPS coordinates of each location were recorded and posted on the internet for fishermen and divers. All locations are in at least 19 feet of water at the

primary drop off to deeper water. The very first shelters were put in Clam Lake using a commercial barge.

TLA Research Associate Leah Varga followed up by diving on shelters to document final positioning and to observe fish colonization. Despite cloudy conditions with limited visibility in Clam Lake, a number of perch and rock bass were observed on the first dive. Subsequent

dives on Torch Lake revealed large numbers of small mouth bass, some near trophy size and schools of smaller fish. An early observation made by Leah was that stumps lying on the bottom had less presence next to the larger fabricated shelters which seemed to be preferred by fish. As a result stumps were not used after the first season.

A project this big required many volunteers. Large quantities of wood were transported from lumber mills each season. Antrim County made field stone available and local residents donated wood and stone. Volunteers collected material each spring and then



## Fish Shelter *continued from page 3*

gathered at shelter construction events. Over the summer they boarded pontoons and barges to deploy shelters. Teams from Intermediate Lake, Elk Lake and TLA worked closely together during the first and second seasons sharing ideas. Each lake was assigned a lake captain to coordinate the project. The repetitive work required refined procedures to advance the project efficiently. One team developed a manufacturing aid called a jig to temporarily hold wood in position for accurate assembly of crates. Lids from charcoal grills served as concrete forms for slab wood tree bases. Two inch holes were bored in slab wood using an industrial drill press. A procedure on the water involved a small anchor with two buoys attached. It was used to locate and to verify the required depth and to show where shelters needed to end up on the bottom. The buoy system and a hand held GPS device were managed by a "spotter" boat, which along with volunteers on the barge or pontoon, worked as a team to put shelters at the depth and locations designated on the permits.

By the third season deployments were mostly routine but there were bumps along the way. A day on Torch Lake started normally as volunteers gathered at the Yacht Club off East Torch Lake Drive to load a pontoon. Conditions were marginal with stiff winds as they rounded the main point and turned uplake. Then, one of the crates

broke open as it was dropped over the side. The field stone ballast ended up on the lake bottom right where it was supposed to go but the crate remained bobbing in heavy waves almost submerged. Towing a submerged four foot crate weighing several hundred pounds back to the launch point in rough waves was an experience the volunteers won't forget. It ended well, however, because that crate was able to be repaired, refilled with field stone ballast and placed at the designated spot the following spring.

By the fourth season Intermediate and Elk lakes had completed their combined twenty five locations. The TLA team covering Bellaire, Clam and Torch lakes still had fifteen of their over fifty locations to complete. Volunteers responded by stepping up the pace of construction. It was during that fourth season that we lost long time TLA member and Lake Bellaire project captain, Bob Bagley, after an illness. The very first article about this project was authored by Bob and appeared in these pages in January 2012. Many volunteers remember how any crate Bob helped assemble was "dedicated" to Lake Bellaire and could be placed nowhere else!

The final season kicked off with volunteers gathering to make ten crates which was a record for a single construction event. Along with a complement of slab wood trees, these were headed to Torch Lake. Due to its size,

Torch was permitted thirty three locations, more than any other lake. Both Torch and Elk Lakes will likely benefit most from fish shelters because their bottoms are otherwise barren of woody cover preferred by warm water species like bass, pike and perch. For all lakes, fish shelters help compensate for shorelines cleared of most natural wood over the years by developers and provide the necessary habitat for fish populations and their food sources. They also give anglers places where fishing success is improved. The specific locations can be found by following links on the 3lakes.com website or by visiting <http://tinyurl.com/ERCOL-Shelters>.

The Three Lakes Association and fish shelters project team thank our partner lake associations, volunteers, location sponsors and the many people and local businesses that made donations of money and materials. Thanks especially to the following; Antrim Conservation District, Tip of the Mitt Watershed Council, The Watershed Center Grand Traverse Bay, LakeShore Marine Construction, Anderson Family Enterprises, Inc. and Matelski Lumber. Volunteers are looking forward to time off but talk of a future second phase has started where habitat improvement will focus on shallower water to benefit aquatic insects, minnows and forage fish which help support prized populations of game fish.



# Septic Systems: *Advocating for Water Quality Protection*

What can property owners within this watershed do to minimize the amount of phosphorus in their wastewater from entering the lakes, which impacts water quality?

As part of TLA's long-range strategy for protecting water quality, five of our board members have been participating in meetings of a Septic Sub-Committee of the Elk River Chain of Lakes-Watershed Protection plan Implementation Team (ERCOL-WPIT). In addition to TLA's Becky Norris, Fred Sittel, Rick Doornbos, Tina Fields, and Dean Branson, Tip of the Mitt's Grenetta Thomassey is spearheading this Sub-Committee that is attempting to accomplish two related objectives:

Developing strategic options for regulatory oversight of septic systems in three counties, including Antrim County. Part of this objective includes the upgrading of the Sanitation Code for new & replacement septic systems, and part of this objective could involve actions to help assure the intended functioning of several thousand existing septic systems in the watershed for the service life of the septic systems.

Developing a new Watershed Protection Plan for the Elk River Chain of Lakes.

Other participants in this Sub-Committee include Scott Kenzierski (Health Department of Northwest Michigan), Christine Crissman (Executive Director,

Grand Traverse Watershed Center), Bob Kingon (Elk-Skegemog Lakes Association) and Keith Termatt (Executive Director, Township Network News). The overall objective of this Sub-Committee is to help minimize the amount of phosphorus from septic systems from entering the lakes and streams in this watershed. Historically sanitation was the primary purpose of septic systems.

So far, this Sub-Committee has focused on the following two aspects of septic systems:

Ideas for upgrading the Sanitation Code for new & replacement systems

Ideas for improving regulatory oversight of existing septic systems

Thanks to Fred Sittel, the Sub-Committee has become familiar with engineering details of possible septic system configurations for an improved Sanitation Code, which is used to specify the design of new & replacement septic systems based on site conditions. Fred is investigating opportunities to improve the distribution of wastewater effluents over the area of drain fields in a more uniform manner, which could improve the removal of nutrients and help protect lake water quality.

Thanks to Grenetta Thomassey and Scott Kenzierski, this Sub-Committee has also become familiar with various options for regulatory oversight of existing septic systems. Two of the eight townships with jurisdiction over the shoreline affecting Torch, Clam, and Bellaire Lakes, currently

have oversight ordinances in place that require an inspection of septic systems at the time when property ownership changes; specifically, Clearwater Township, as part of Kalkaska County, and Milton Township.



This Sub-Committee is currently reviewing the findings from these, and other regulatory oversight initiatives. A synopsis of this Sub-Committee's activities will be presented at an Annual communications meeting with representatives of local units of government on April 4<sup>th</sup> at the Senior Center in Bellaire.

TLA's advocacy is to help reduce the amount of phosphorus entering the watershed, which may also be connected to its ongoing efforts to discover the causes of golden brown benthic algae, and its collaboration with a TLPA Task Force, spearheaded by Gary Petty, to pursue best practices to manage/reduce golden brown benthic algae.

## - Membership counts! -

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\* \* \* \* \*

**To join Three Lakes Association, please visit our website [3lakes.com](http://3lakes.com) or return this form with your check to:**  
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# Did you Know?

- Insufficient shade along the shoreline contributes to rising water temperatures, which affects fish habitats and creates conditions for unwelcome algae growth.
- Excess fertilizers, pesticides and other materials found around the shoreline washes into a lake after a heavy rain.
- Installation of native landscaping costs almost half as much as traditional landscaping while reducing mowing, turf maintenance and weeding requirements.



# What can you do?

- A growing number of lakeshore owners are switching from traditional mowed lawns to native grasses and wildflowers. In addition to helping wildlife, native plants require little to no maintenance. That frees up more of your time to go fishing, watch wildlife, and otherwise enjoy being at the lake.
- Leave fallen trees in the water to provide habitat for fish and wildlife.
- Minimize the size of your sandy beach to allow for more natural shoreland and underwater vegetation.

For more information on planning your natural shoreline, go to [https://www.watershedcouncil.org/uploads/7/2/5/1/7251350/tomwuc\\_sensibleshorelineweb.pdf](https://www.watershedcouncil.org/uploads/7/2/5/1/7251350/tomwuc_sensibleshorelineweb.pdf)

## ANTRIM CONSERVATION DISTRICT

The first 30 pounds of waste are **FREE**, there is a .50¢ charge for every pound thereafter.

All pesticides and herbicides are **FREE** through Michigan Clean Sweep Program!

### Items NOT Accepted

Ammunition • Radioactive Items • Tires  
Medicines (*Please visit [www.pillsinthepod.com](http://www.pillsinthepod.com)*)

Visit our website at [www.antrimcd.com](http://www.antrimcd.com) to verify which waste products are accepted.

Please contact our office with any questions! 231-533-8363

## 2017 Household Hazardous Waste Collection

**May 13 • 9am - 1pm**

117 Lake St., Elk Rapids  
DPW Station behind Shell Station

**August 5 • 9am - 1pm**

201 E. Broad St., Bellaire  
Parking lot adjacent to food pantry

**September 23 • 9am - 1pm**

Palmer Park, Mancelona  
Palmer Rd., off of US-131



# *Watershed Stewardship*

Not everyone lives next to a river or lake but we all live in a watershed so our actions impact water resources. TLA members frequently ask, "What can we do to safeguard water quality and protect it for future generations?" To answer this question, we will be publishing a series which identifies best practices for property owners. Please share these with friends and neighbors. If you have questions please contact a TLA board member.

## *TOPIC #1: LAWN CARE AND LANDSCAPING BEST PRACTICES*

- Keep grass 3 inches tall to crowd out weeds, reduce watering and promote deep roots
- Have soil tested and fertilize only when necessary
- Use phosphorus free fertilizer and don't apply close to the waters edge
- Use weed and insect control sparingly, dispose of containers responsibly
- Establish a buffer zone with native plants between lawn areas and shoreline to filter runoff
- Pick up pet waste and dispose of properly
- Compost and burn as far from shorelines as possible
- Consult your lawn service professional about low impact practices



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The mission of the Association is to provide leadership to preserve, protect, and improve the environmental quality of the Elk River Chain of Lakes Watershed for all generations with emphasis on Lake Bellaire, Clam Lake, Torch Lake and their tributaries.



This newsletter printed on recycled paper

# Boaters Safety Class

Hosted by the Antrim County Sheriff's Recreation Department

**June 24, 2017 • 8-3 p.m.**

Lunch is included

**Antrim County Building**  
203 E Cayuga St, Room 211, Bellaire

There is no charge for this class but space is limited.

RSVP to 231- 533-8627

*Participants must be 12 years old before the end of the summer season.*

*Adults welcome too!*

## Michigan Department of Natural Resources



Certification Number	Certification Date
<b>978-6543</b>	<b>08/31/11</b>
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