

Grass River Large Woody Debris Demonstration Project

Last summer, the Grass River in Antrim County received a very large dose of tender loving care. This summer, we are anxious to review the results of that attention, which comes in the form of a pilot project of several log structures known as large woody debris. Located along the banks of the Grass River between Lake Bellaire and Clam Lake on the Elk River Chain of Lakes, this small-scale project is designed to do two things. First, it should demonstrate whether log structures can improve the aquatic habitat of a river laden with a heavy load of sediment. Second, it should also determine if log structures along the banks of Grass River could be a useful technique to improve the navigability of a connecting river by deepening portions of the channel that have become shallow, due to the buildup of sediment.

The Elk River Chain of Lakes Watershed Plan Implementation Team (ERCOL-WPIT) addressed sedimentation build up in both the Grass and Rapid Rivers as one of our very first issues of concern, when we formed in 2010. Importantly, this pilot project is compatible with the Grand Traverse Bay Watershed Management Plan. Recommended plan steps endorse practices that help constrain unnaturally wide channels and concentrate flow into deeper, narrower channels. The Plan also recommends habitat improvements, as well as the control of sedimentation. As such, the ERCOL-WPIT fully supports this project.

Three Lakes Association (TLA) and Elk-Skegemog Lakes Association (ESLA) funded a study done by Michigan State University researchers in 2012, and used those results to propose this project. A Waterways Work Group coordinated efforts of the Antrim County Operator of Dams and several organizations, including Grass River Natural Area (GRNA), the Antrim Conservation District, Friends of Clam Lake, TLA, and ESLA. The Antrim



Installation of large woody debris in the Grass River.

County Board of Commissioners contributed funding and authorized the Operator of Dams to manage the project. Antrim County also applied to the Department of Environmental Quality for a permit to install the structures, with the involvement of the Department of Natural Resources Fisheries Division. The County hired Mr. Ken Reed, who has installed hundreds of these structures in Northern Michigan waters.

Volunteers from the Work Group implemented the project. Antrim County, several local businesses, and TLA provided funding donations to cover installation of several structures. If successful, the log-structures technique could be applied at a number of sites on connecting channels throughout the Chain of Lakes.

For one of our “Wednesdays on the Water” events, the Watershed Council will team up with the Antrim County Operator of Dams, Mark Stone, to tour this project on the Grass River and see how things are progressing. If you are interested in joining that tour, please call our office at (231) 347-1181 to register for the event.



Ariel view of the completed Grass River large woody debris project that was installed to improve aquatic habitat and improve navigability.



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Gail Gruenwald
Executive Director

Reflections From Our Executive Director

Thirty five years. That's how long the Tip of the Mitt Watershed Council has been speaking on behalf of northern Michigan's waters. We have experienced many victories and some defeats in the past 35 years in our efforts to safeguard our resources. All in all, we have witnessed increased awareness and understanding of the integral role water resources play in our quality of life and economic well being.

Some issues have plagued us for many years or decades, others are short lived with positive resolutions. In general, the quality of our lakes and streams has remained somewhat steady. One major exception to this is the enormous impact exotic invasive species have had throughout our region. This challenge continues and we expect to be fighting this battle for many years to come.

In preparation for this summer's annual meeting I have had a chance to go through all of our previous annual reports. Over the past 35 years we have employed more than 50 talented staff members, elected 165 volunteer Board members, been blessed by thousands of hours of volunteer time from hundreds of volunteers, and provided a productive learning experience to dozens of seasonal interns.

Our 35 years of programming has been tremendously diverse, from production of educational videos to removing dams from our rivers. I can't even begin to count the number of brochures, newsletters, and other publications we have produced and distributed nor the number of individuals we have educated and partnered with on a myriad number of topics.

The scope of our work has ranged from an individual consultation with a property owner to testifying before Congressional committees regarding national policy. The common theme for all of our work is a solid basis in science and policy. This is why we have earned the respect of a wide range of constituents and stakeholders. We keep politics out of our positions and we are able to work equally well with government officials, business interests, community groups, and citizens. I believe this is the key to successful advocacy and has resulted in a solid, effective organization and positive results for our resources.

We have helped to elevate water quality issues into mainstream dialogue and decision making. As such, Northern Michigan's lakes, streams, wetlands, and ground water have a place at the table when policies are enacted and decisions are made that may impact them. Our waters have benefitted from our presence all these years and we will continue to watch out for them for many decades to come.

See you in the fall!

Volunteer Stream Monitoring Dates

Training Day - September 13, 2014

Learn about the various aspects of the program and general macroinvertebrate biology, equipment and field data sheet review, and a hands-on practicum on the Bear River, so that volunteers can "get their feet wet."

Field Day - September 20, 2014

Work with a team and put your training to work by monitoring two sites on the same river or stream.

Indoor Identification - October 5, 2014

Time to identify the macroinvertebrates that were collected in the field.



For more information, please contact Dan Myers at 231-347-1181 or dan@watershedcouncil.org.

Signs of the Times

New signage brings awareness to stormwater runoff

If you're on the road in the Little Traverse Bay Watershed this summer, you might just notice a couple of new signs thanks to support from the Petoskey-Harbor Springs Area Community Foundation. Little Traverse Bay Watershed Awareness signs are installed on major roads where they intersect with the watershed boundary. The signs are intended to bring watershed awareness to residents and visitors by welcoming them as they enter the watershed. The signs include the message "protect what you love" and the best way to protect our lakes, streams, and wetlands is watershed protection.



(Above) Emmet County recycling trucks are creating awareness with these new *Stormwater Matters* signs.

While you're out and about, keep your eyes peeled for Emmet County recycling trucks, as they are now sporting *Stormwater Matters* signs. *Stormwater Matters* is the Watershed Council's public outreach campaign to bring awareness to the community about what is stormwater, how it impacts water resources, and how it can be managed to protect water quality. Stormwater management is a critical piece of watershed protection as stormwater carries with it nonpoint source pollutants to our lakes, streams, and wetlands. With support from the Petoskey-Harbor Springs Area Community Foundation, these magnetic signs are another communication tool to bring awareness to stormwater in our community. Teaming up with Emmet County's Department of Public Works Recycling Program to promote *Stormwater Matters* is a natural partnership given the community's strong support of the County's recycling efforts. We will also be promoting *Stormwater Matters* through other means, including our *Stormwater Matters Tips*, with support from local media.



Watch for these and other *Stormwater Matters* ads that will run courtesy of Harbor Light Newspaper.

Photo of installed sign or Jen and Funder holding the sign. Need by Wednesday morning.



Walstrom Marine earns a PERFECT SCORE!

As you know, Tip of the Mitt Watershed Council headquarters is located in Petoskey, Michigan on the shores of Little Traverse Bay. We take pride in the fact that all of the marinas on the Bay participate in the Michigan Clean Marina Program. Recently, however, one of them really rose to the occasion!

It came to our attention that when Walstrom Marine was inspected for its Clean Marina designation earlier this spring, the inspector noted that they were the first marina in Michigan to have achieved a perfect score when inspected for recertification! The Watershed Council would like to extend our heartfelt congratulations to them for this excellent performance!

As participants in this program, marinas voluntarily pledge to maintain and improve Michigan's waterways by reducing or eliminating releases of harmful substances into surface waters, and also phasing out practices that can damage aquatic environments. According to the Michigan Clean Marina Program, participants complete a 10-step process to receive certification, including training,

a self-evaluation checklist, and a site visit. Certified marinas strive for continuous improvement in daily environmental stewardship practices. The program also notes the following benefits to becoming a certified Clean Marina:

- Reducing insurance and waste disposal costs
- Reducing pollution and improving water quality
- Protecting fish and wildlife habitat
- Enhancing public image by promoting environmentally sound practices

Again, congratulations to Walstrom Marine!!

Visit your Aquavist Website at: www.watershedcouncil.org/aquavists/ It is full of incredible resources for you, plus news and information about the hottest topics in your county. You can link to recent alerts, as well as the Antrim, Charlevoix, Cheboygan, and Emmet County news and resource pages. Any time you want us to highlight something, just let us know! For more information, contact Grenetta Thomassey, Program Director at grenetta@watershedcouncil.org or (231) 347-1181 ext. 118.



DEQ Visit

Grenetta writing short blur for this.



BEWARE: *Mobile Meth Lab Waste is a concern for the safety of our volunteers*

Volunteers who clean up streamside or roadside litter are being urged to watch for potentially toxic debris discarded from methamphetamine labs.

Methamphetamine, or meth, is a highly addictive stimulant that can be made using household chemicals and equipment and common cold remedies containing ephedrine or pseudoephedrine.

Meth labs have been found in home sheds, motel and hotel rooms, in car trunks, outside in the woods, and along our rivers. Entire labs can be found in tool boxes, coolers, or other small storage containers. Manufacturing or "cooking" meth can leave behind large amounts of toxic waste that can be extremely dangerous for the environment and people who don't know what to look for to spot a potential meth lab.

Hazardous waste from meth manufacturing has been found along local streams making it a concern for the safety of our volunteers. Individuals who come across materials used to make the drug can be burned, or their lungs damaged from inhaling fumes.

The safety of our volunteers and our community is extremely important. Knowing what to watch for and what to do if you suspect you have found meth lab waste will help keep you safe and protect others.

If you encounter any of the signs of a meth lab, call 911 immediately to notify local police. If you find any of the items above or similar products, DO NOT touch, smell, or examine them. Prodding the material could further endanger you or others in the area.

If you find any of the items or similar products grouped together this could be an indication of meth lab waste.

PLAY IT SAFE...

- DO NOT TOUCH
- DO NOT SMELL
- DO NOT EXAMINE
- CALL 911 TO REPORT LOCATION TO POLICE

Watch for bottles with hoses attached or that has contents resembling chewed popcorn.



Avoid handling garbage bags with cat litter can contain deadly gases and are sometimes called "death bags."



Flammable solvents: starting fluids, Coleman Fuel, camping fuel, paint thinner, etc.



Any container with "bi level" liquids



Large quantities of glass and plastic containers, buckets, plastic hose



Loose pills or packaging from pills that contain ephedrine or pseudoephedrine



Any containers with plastic tubing or hoses



Quantities of coffee filters or paper towels with unusual stains



Lye ("Red Devil"), Crystal Drano, or other drain cleaners



Disassembled lithium batteries



Containers such as muriatic acid, iodine, or hydrogen peroxide



Cold packs containing ammonium nitrate



Trash bags with an ether, solvent, or ammonia odor



Table or rock salt

Please share this information with your neighbors and friends. Visit our website to print a flyer on Mobile Meth Lab Waste: www.watershedcouncil.org

Avian Botulism: 2013 Report

It is a tranquil morning in the open waters of Northern Lake Michigan. A common loon drifts above the shallow shoals, its stomach gurgling as it eyes the round gobies scattered among the cobble. The loon has flown hundreds of miles to reach this pit-stop in its yearly migration to warmer waters. He dives down and swims with his webbed feet skimming the mussels and algae attached to the cobble, picking out his prey with the sharp pointy beak evolution has provided him.

Toward the end of the morning the loon begins to feel a tingly sensation in his muscles. He panics as he slowly loses motion in his legs and wings. Lastly he can no longer keep his head up, and suffocates in the crystal-blue waters.



Number of wildlife fatalities down considerably from 2012.

Photo by: John Thurston

This loon, like tens of thousands of waterbirds before him, has just fallen victim to a deadly condition known as avian botulism. It is caused by a neurotoxin produced in the decaying algae along the bottom and shoreline of Northern Lake Michigan – the same yucky green glop that since the mid-2000's has been ruining late-summer trips to the beach. Though it is harmless under normal concentrations, the toxin bioaccumulates at each level of the food chain and the loon is at the top.

Tip of the Mitt Watershed Council partners with the Emmet County Lakeshore Association and community volunteer “Beach Rangers” to collect data that will help answer these questions. The Beach Rangers also remove contaminated carcasses from the shorelines to prevent the spread of the toxin to scavenging wildlife and pets.

In the fall of 2013, 29 Beach Rangers documented 72 wildlife carcasses along the Lake Michigan shoreline of Charlevoix and Emmet Counties. The Beach Rangers walked 23.4 miles of shoreline transects an average of 5.6 times throughout the fall, totaling 157.4 miles of monitoring. An additional 11 carcasses were reported by the general public. The 82 carcasses were much fewer than 2012 when nearly 1000 wildlife carcasses were documented. Thanks to all the Beach Rangers who participated and good news for the birds!

Researchers believe invasive zebra and quagga mussels are heavily involved with the outbreaks – they create environmental conditions preferable for growth of algae along the lake bottom. Also, data is beginning to relate intense avian botulism outbreaks with years of low water levels and higher water temperatures – ideal for the growth of algae and anaerobic production of the toxin.

If you would be interested in walking a weekly autumnal shoreline transect and learning waterbird identification hands-on, we are always welcoming new Beach Rangers into the team. Contact dan@watershedcouncil.org or 231-347-1181 for more information and to sign up.

Deluge of Monitoring and Su

During 2013, the Watershed Protection Team completed numerous inventories, surveys, workshops, and restoration projects. The following is a recap of last year's activities.

Shoreline Surveys: Lake shorelines are surveyed to document conditions and land management practices that impact water quality and the lake ecosystem. Typical parameters assessed for shoreline properties during these surveys include nutrient pollution indicators (e.g., *Cladophora* algae), erosion, greenbelts, alterations (e.g., seawalls), stream inlets, and emergent aquatic plants. The Lake Huron shoreline on Duncan and Grass Bays was surveyed last summer to gather information that will be used to develop a nonpoint source pollution watershed management plan, a project funded by the Michigan Department of Environmental Quality (MDEQ). In addition, the Watershed Council and Pickerel Crooked Lakes Association continued efforts to address problems identified in our 2012 shoreline survey.



Road-Stream Crossing Inventories:

Places where roads cross streams are a source of nonpoint source pollution and can be a barrier to fish passage. Pollutants from road-stream crossings (RSXs) that are carried to the stream in runoff include sediments, de-icers (salts),

leaking automotive fluids, and heavy metals. RSX inventories were completed for the Duncan Bay, Grass Bay, Stover Creek, and Little Traverse Bay Watersheds during 2013. Inventory data will be utilized to address problematic sites and develop watershed management plans.

Streambank Surveys: Eroding streambanks contribute sediments and nutrients to the stream, which can degrade water quality and in-stream habitat. Streambanks are surveyed to document the extent and severity of erosion, as well as identify causes and remedial measures. Erosion information gathered last summer from Elliott Creek will be used during development of the Duncan-Grass Bays watershed management plan.

Tributary Monitoring: Tributary streams are conduits that transport water from throughout the watershed into a receiving lake. Runoff from rain or snowmelt picks up pollutants from the landscape, which washes into the tributaries and ultimately drains into lakes. Monitoring all major tributaries flowing into a lake provides valuable information for assessing the impacts of individual streams as well as the collective whole. Tributary monitoring, which includes both water quality monitoring and discharge measurements, was carried out in the Walloon Lake,

rveys: The Watershed Protection Team Ramps it Up!

Lake Charlevoix, and Duncan and Grass Bays Watersheds during 2013. The Walloon Lake Trust and Conservancy and Walloon Lake Association sponsored their tributary study while the other two projects were funded by MDEQ.

Water Quality Monitoring: In addition to tributaries, water quality monitoring occurred on many lakes last season. In the early spring, 60 lakes and streams were monitored as part of the Comprehensive Water Quality Monitoring Program. Monitoring continued through the 2013 field season on Elk Lake, Lake Skegemog, Duncan Bay, and Grass Bay. Parameters monitored include dissolved oxygen, pH, conductivity, water temperature, nutrients, and chloride. The Elk-Skegemog Lake Association, MDEQ, and Watershed Council members funded these monitoring activities.

Stormwater Management: When the natural landscape is developed with buildings, parking lots, sidewalks, and other impervious surfaces, stormwater becomes a water quality issue for our lakes, streams, and wetlands. Precipitation that would normally infiltrate into the ground instead flows across the developed landscape, picks up pollutants that have accumulated on the ground (e.g., dirt and automotive fluids), and carries them into nearby surface waters. Last year, MDEQ funding allowed us to work with the City of Cheboygan to evaluate stormwater impacts to Duncan Bay. We also started the process of addressing stormwater problems in the Village of Boyne Falls to protect the Boyne River, which was funded by the Charlevoix County Community Foundation. As part of the Watershed Council's Great Lakes Restoration Initiative-funded Little Traverse Bay Stormwater Management Initiative (LTBSMI), the final phase of construction at the North Central Michigan College's stormwater wetland was completed. Michigan native plantings were installed, an overlook was built, and a woodchip path was routed around the newly constructed stormwater wetland and sediment forebays. Three additional rain gardens were installed as part of the Bay View Rain Garden Initiative, which is also a part of the LTBSMI.

Aquatic Invasive Species Management: Every year, aquatic invasive species become more of a problem in Northern Michigan. Invasive species already present in our lakes, streams, and wetlands



are rapidly spreading while many others are knocking at our door and threatening to invade. Impacts are often severe, ranging from displacement of native species and major alterations in natural ecosystems to nuisance plant growth that affects recreation and tourism. During the 2013 season, we continued our battle against the invasive *Phragmites*, working with shoreline property owners to control infestations along 70+ miles of Lake Michigan shoreline in Emmet County.



Aquatic Vegetation Surveys:

Aquatic plants provide many benefits to aquatic ecosystems, but can become a nuisance when growth is excessive. Heavy aquatic plant growth can occur naturally, given the correct combination of environmental variables (e.g., light and nutrient availability), but is accelerated due to factors such as nutrient pollution or the introduction of non-native species. One of the

first steps required for effective aquatic plant management is a comprehensive survey. Last year, plant surveys were conducted on Long Lake (Cheboygan County), Walloon Lake, Lake Bellaire, and Clam Lake. The surveys on Long and Walloon were sponsored by the respective lake associations, while the Dole Foundation funded surveys on Clam and Bellaire.

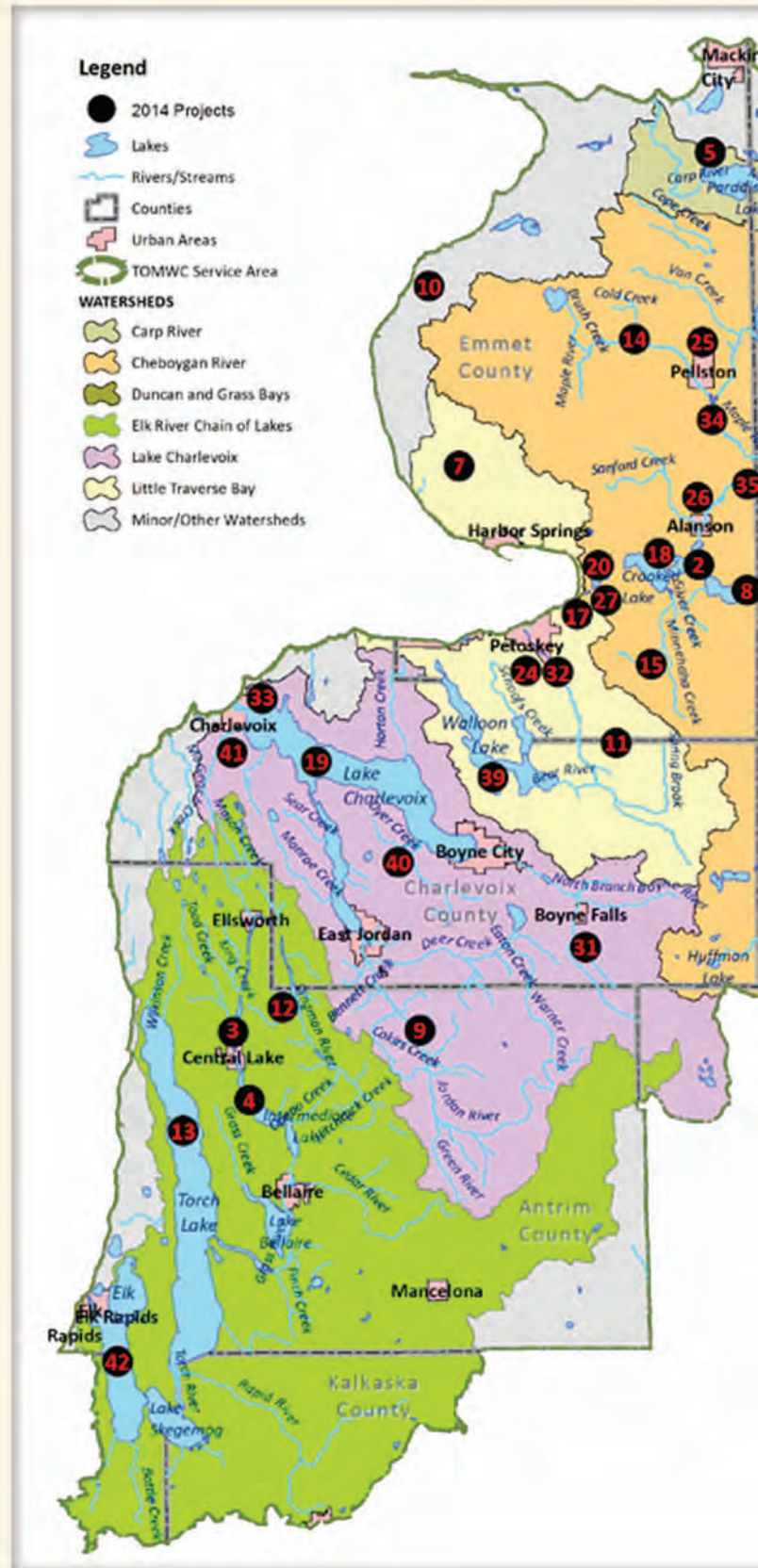
Shoreline and Streambank Restoration: As part of the Watershed Council's Great Lakes Restoration Initiative-funded Little Traverse Bay Stormwater Management Initiative (LTBSMI), a new, larger culvert allows better passage of Hay Marsh Creek under Holms Road in Charlevoix County. The LTBSMI also supported, along with grants from the MDEQ, Michigan Department of Natural Resources, and the Petoskey-Harbor Springs Area Community Foundation, the installation of a timber bridge and permanent lamprey weir near the mouth of Tannery Creek. The bridge replaces an aging, undersized culvert that was impacting stream flow and causing localized erosion.

Workshops: Two greenbelt workshops were held as part of the Watershed Council's Midwest Glacial Lakes Partnership grant. The Watershed Council partnered with Mullett Lakes Area Preservation Society (MAPS) and Three Lakes Association (TLA) to implement the hands-on, homeowner events that included instruction and installation of greenbelts on Mullett Lake and Lake Bellaire.



Priority Parcel Analysis: One of the most effective tools for long-term water quality protection is permanent protection of land, particularly sensitive lands such as those containing wetlands. In order to protect sensitive areas in the Torch Lake Watershed, the Torch Lake Protection Alliance worked with the Watershed Council to evaluate individual land parcels based on multiple ecological criteria. Criteria include: parcel size, wetlands, lake shoreline, streams, groundwater recharge potential, threatened/endangered species, and wildlife corridor value. Analysis results provide a tool to land conservancies, governmental entities, and others to assist in prioritizing land protection efforts in a manner that provides the greatest benefit to local ecosystems, while also complementing existing land protection efforts.

1. **Aquatic Vegetation Survey:** the Black Lake Association is sponsoring a comprehensive survey of aquatic vegetation and walleye habitat.
2. **Aquatic Vegetation Survey:** the Pickerel-Crooked Lakes Association is working with local units of government to fund a comprehensive survey of both lakes and the Crooked River.
3. **Aquatic Vegetation Survey:** a comprehensive survey of Hanley Lake will be conducted as part of an invasive species monitoring grant from Michigan Department of Environmental Quality (MDEQ).
4. **Aquatic Vegetation Survey:** a comprehensive survey of Intermediate Lake will be conducted as part of an invasive species monitoring grant from DEQ.
5. **Educational Workshop:** partner with Paradise Lake Association (PLA) to present a natural shoreline workshop for homeowners.
6. **Educational Workshop:** partner with Mullett Area Preservation Society (MAPS) to provide a shoreline landscape design for water quality protection workshop
7. **Educational Workshop:** Host an Invasive Species Workshop for Local Road Commissions to bring greater awareness about "roadside invaders" and their management.
8. **Educational Workshop:** co-instruction of a Certified Natural Shoreline Professional training at Camp Pet-o-se-ga on Pickerel Lake.
9. **Invasive Species Management:** all 70+ miles of Lake Michigan shoreline in Emmet County will be surveyed for the third time for invasive *Phragmites*.
10. **Invasive Species Management:** purple loosestrife control efforts will be carried out by dispersing *Galerucella* beetles in the Bear River corridor.
11. **Invasive Species Management:** the Upper Elk River Chain of Lakes, from Beals Lake to Intermediate Lake will be surveyed for *Phragmites*, purple loosestrife, Eurasian watermilfoil, curly-leaf pondweed, and quagga mussels.
12. **Priority Parcel Analysis:** final products of the priority parcel analysis for the Torch Lake Watershed will be used to prioritize permanent land protection efforts.
13. **Road-stream Crossing Inventory:** priority road-stream crossings will be inventoried in the Maple River Watershed and other Burt Lake direct tributaries.
14. **Road-stream Crossing Inventory:** priority road-stream crossings will be inventoried in the Crooked River Watershed.
15. **Road-stream Crossing Inventory:** priority road-stream crossings will be inventoried in the Sturgeon River Watershed, field work to be conducted by Huron Pines.
16. **Shoreline and Streambank Restoration:** we will be putting the final touches on our Tannery Creek restoration project by installing Michigan native plants on the streambanks and in the area immediately around the new timber bridge.
17. **Shoreline Survey:** follow-up to the 2012 survey on Crooked and Pickerel Lakes continues with property management assessment letters and informational brochures mailed to riparians.
18. **Shoreline Survey:** questionnaires to assess shoreline property management will be sent out to riparians as follow-up to the 2012 survey on Lake Charlevoix.
19. **Shoreline Survey:** Round Lake will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.



20. **Shoreline Survey:** Wildwood and Lance Lakes will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
21. **Shoreline Survey:** Silver Lake will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.



Overview of the 2014 Field Season: *An ambitious list of projects*

- 22. Stormwater Management:** we continue working with the City of Cheboygan to assess stormwater impacts to Duncan Bay
- 23. Stormwater Management:** Continue installation of rain gardens in Bay View as part of Little Traverse Bay Stormwater Management Initiative.

- 24. Stormwater Management:** Pellston will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
- 25. Stormwater Management:** Alanson will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
- 26. Stormwater Management:** the urbanized area around Spring Lake will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
- 27. Stormwater Management:** Wolverine will be surveyed to gather information for development of the Burt Lake – Sturgeon River watershed management plan.
- 28. Stormwater Management:** Vanderbilt will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
- 29. Stormwater Management:** the northern end of Gaylord will be surveyed to gather information for development of the Burt Lake – Sturgeon River Watershed management plan.
- 30. Stormwater Management:** we will continue to work with the Village of Boyne Falls to manage stormwater that threatens the Boyne River.
- 31. Stormwater Management:** dogs from Environmental Canine Services will help us identify any sources of fecal contamination in the City of Petoskey storm sewer system.
- 32. Stormwater Management:** dogs from Environmental Canine Services will help us identify any sources of fecal contamination in the City of Charlevoix storm sewer system.
- 33. Streambank Erosion Survey:** the lower Maple River from Lake Kathleen to Burt Lake will be surveyed for streambank erosion.
- 34. Streambank Erosion Survey:** the Crooked River from Crooked Lake to Burt Lake will be surveyed for streambank erosion.
- 35. Streambank Erosion Survey:** the Sturgeon River from Wolverine to Burt Lake will be surveyed for streambank erosion.
- 36. Water Quality Monitoring:** we continue to monitor Duncan Bay, Grass Bay, and tributaries for our nonpoint source pollution assessment that will be used for watershed management plan development.
- 37. Water Quality Monitoring:** we begin our monitoring of the Burt Lake tributaries for our nonpoint source pollution assessment that will be used for watershed management plan development.
- 38. Water Quality Monitoring:** this is year 18 of early spring phosphorus monitoring in all five basins of Walloon Lake.
- 39. Water Quality Monitoring:** we continue our Lake Charlevoix Tributary Study, monitoring all major tributaries flowing into the lake six times throughout this year.
- 40. Water Quality Monitoring:** we continue monitoring four locations on Stover Creek to collect data that will help write the Stover Creek Restoration Plan.
- 41. Water Quality Monitoring:** this is the 14th year of monitoring Elk and Skegemog Lakes, which we visit four times throughout the spring, summer, and fall to collect physical and chemical data from both lakes.

Roadside Invaders:

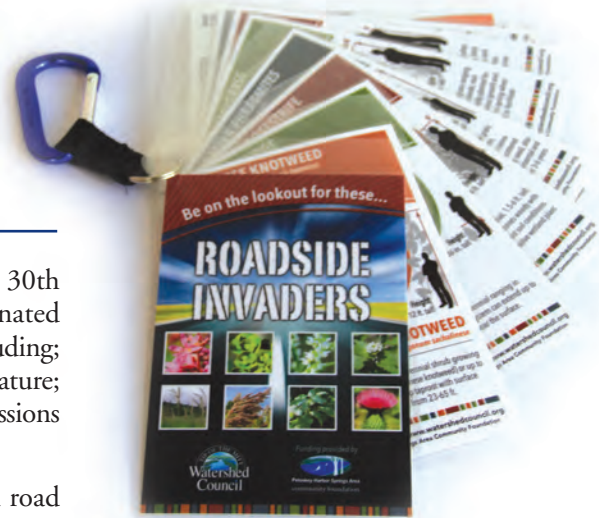
Local Road Commissions gather to learn about invasive species

Local county road commissions gathered at Bear Creek Township Hall on June 30th for an invasive plant species workshop. Tip of the Mitt Watershed Council coordinated the workshop, which featured presentations from invasives plant species experts, including; Phyllis Higman, Michigan Natural Features Inventory; Vern Stephens, Designs by Nature; and Heidi Shaffer, Antrim Conservation District. Attendees learned how road commissions play an important role in controlling the spread of invasive plant species.

Many invasive plant species are spread inadvertently by road commissions when road maintenance is performed. Mowing and ditch clearing are particularly detrimental when invasive plants are present. In fact, mowing actually stimulates growth of some invasive species, such as Phragmites and Japanese knotweed, thereby worsening the infestation. Some species only respond to certain herbicides applied at specific times of the year. Others require a combination of mechanical removal, herbicides, and even burning to have any impact on reducing their spread. Given the variety of invasive plants that are prone to populating roadsides and the complexity of treatment options, road commissions are faced with the ongoing challenge of staying informed.

To assist with field identification, sets of quick reference cards were distributed. The cards feature the top ten invasive plants that are considered particularly noxious and pose the greatest threat to our natural resources and road infrastructure. Information is given for each species along with photos for easy identification. Recommended treatment options are also detailed. The laminated cards are connected with a carabineer and will be kept in the road commission vehicles for quick access while in the field (and on the road).

Attendees included representatives from Emmet, Charlevoix, and Antrim County Road Commissions. The workshop was made possible with a grant from the Petoskey-Harbor Springs Area Community Foundation.



ATTENTION: Lake Michigan Shoreline Property Owners in Emmet County

This summer, throughout the month of July, staff and interns will be walking the entirety of the Emmet County shoreline from Bay Shore to the Straits of Mackinac to survey for invasive *Phragmites*! Emmet County and Tip of the Mitt Watershed Council are teaming up once again to fight this plant and **we NEED your help**. Emmet County will be applying for a county-wide treatment permit for this season. If you are a shoreline property owner, stay tuned! If *Phragmites* is found on your property, it will be time to treat again soon!





Poop-Sniffing Dogs?!


*On the Trail of Stormwater Pathogen Pollution
in the cities of Petoskey and Charlevoix*

Sewage-sniffing dogs will help Tip of the Mitt Watershed Council find the sources of stormwater pathogen pollution, such as E. coli bacteria, that contaminate our waters and force beach closures.

Thanks to grant funding from the Petoskey Harbor Springs Area Community Foundation and the Charlevoix County Community Foundation the Watershed Council is launching a unique stormwater pollution detection program this summer.

The Stormwater Pollution Detection Program will protect Little Traverse Bay and Lake Charlevoix from bacteria pollution. Through the use of scent trained canines, or "poop sniffing dogs," we will locate and track, if detected, human sewage in the City of Petoskey and City of Charlevoix storm drains in early August. The Watershed Council plans to partner with both Cities to address these sources and thus reduce bacteria pollution. Using the dog's keen sense of smell is an effective, easy, and low-cost methods to identify and locate sources of fecal contamination in storm drainsthat discharge to lakes and rivers.

This unique talent will be on display on Monday, August 4th in Petoskey and Tuesday, August 5th in Charlevoix. The dogs and their handlers, from Environmental Canine Services LLC, will put on a demonstration so the public can better understand what it means to train sewage-sniffing dogs and see them in action. This event will be hosted by Tip of the Mitt Watershed Council. Additional details can be found on our website as the dates get closer. We hope you can join us to learn more about this unique and effective pollution detection program.

A wide-angle photograph of a sandy beach meeting a calm body of water. Several people are visible in the water, some standing and some sitting. On the right, two people are sitting on beach chairs. The sky is clear and blue.

Come learn how poop-sniffing dogs are preventing beach closures all across the country. A family friendly public demonstration of these uniquely trained dogs will be held on August 4 and 5.

Visit our website's "Events" tab for details.



POD commercial created by NCMC students

Meet the talented people behind the Watershed Council's new POD commercial. Animation students from North Central Michigan College took on a special project with enthusiasm and dedication. We wanted to provide the students with a real world opportunity, something they could put in their portfolio as they progress in their careers. Working with the animation instructor, Anne Morningstar, we were able to create a special program that allowed them to earn college credit for their work. They also learned about the POD program and were able to share our important message with all of Northern Michigan using their newly learned skills. The animated commercial can be seen on local network stations ABC, CBS, Fox, and NBC.



Above left to right: Logan Ward, Michael Harlan, Shelby Stevens, and Joey Anderson.

You're never too young to pitch in

Simon Gelb, age 7, shows off over 1,200 mail pieces he sealed and ran through the postage machine. This batch was being mailed to shoreline home owners on Walloon Lake. Keep up the good work Simon!



Pigeon River Country Watershed Driving Tour

10:00 a.m. - 3:00 p.m.

The largest contiguous block of wild country in the lower peninsula of Michigan and home to three of Michigan's premier trout streams, Pigeon River Country is one of the most unique and impressive landscapes in Northern Michigan. However, this land is not without threats. Join us to explore the natural wonders, learn about water quality status, and how the Watershed Council is working to minimize threats to this majestic resource.

Limit: 20 participants

Fee: \$20 member/\$25 non-member

Pre-registration required, please call 231-347-1181.



Prescription and Over-the-Counter Drug Collection Event

9:00 a.m. - 12:00 Noon

Emmet County Drop-Off Center

7363 Pleasantview Road, Harbor Springs

We will be accepting prescription drugs including controlled substances, over-the-counter medications, pet medicine, nutritional supplements and vitamins, skin care products and more. To learn more about the POD program, visit

www.pillsinthepod.com

Help keep pharmaceuticals out of our waters!



AUGUST

23

10th "Healing the Bear" Bear River Cleanup

August 23, 2014
9:30 a.m. - 1:30 p.m.
Bear River Shelter, Petoskey

Join us for this fun, family-friendly event as we remove trash along the river from Walloon Lake to the Petoskey Waterfront. Volunteers of all ages and abilities are invited to walk, wade, or canoe. Breakfast, lunch, and t-shirts are free for volunteers! Meet 9:30 a.m. at Petoskey's Bear River Shelter. Pre-registration is encouraged so we can plan accordingly. Please contact Dan Myers at 231-347-1181 or email dan@watershedcouncil.org.

"Huffy" Huffman Commemorative Paddle

10:00 a.m. - 12:00 Noon
Location: Round Lake, Petoskey

Join Tip of the Mitt Watershed Council, Little Traverse Conservancy, and Top of the Michigan Trails Council as we honor "Huffy" Huffman, an influential leader whose passion for the outdoors left indelible fingerprints on all three organizations. This easy paddle will circumnavigate Round Lake with a brief stop to enjoy the new commemorative display and boat launch built in his honor. This event is free of charge. Pre-registration is required. Call the Watershed Council at 231-347-1181.

AUGUST

9

Northern Michigan Pipeline Symposium

Over 200 people attended the Watershed Council's Northern Michigan Pipeline Symposium on June 24 at Petoskey High School Auditorium. Panelists provided valuable information on pipeline operation, regulation, oil spill response planning, and specific information about Line 5, located in Northern Michigan. The successful event brought greater attention to pipelines and the way our community can work collaboratively to reduce potential risks and impacts of pipeline failures. This is critical to the protection of our water resources and aquatic species, as well as the local communities that depend upon high water quality for their way of life. For those unable to attend, a recap of the event is available at the Watershed Council website www.watershedcouncil.org.



AUGUST

13

Oden Island Pontoon Tour

1:00 p.m. - 4:00 p.m.

Crooked Lake and Oden Island are full of natural features, history, and adventure. Join Water Resource Specialist Dan Myers, AmeriCorps Volunteer Matt Claucherty, Pickerel-Crooked Lake Association's Jan Quaine, and Little Traverse Conservancy's Melissa Hansen for an educational pontoon ride. This is a relaxing tour for all abilities.

Limit: 20 participants

Fee: \$20 member/\$25 non-member

Pre-registration required, please call 231-347-1181.

AUGUST

20

Grass River Pontoon Tour

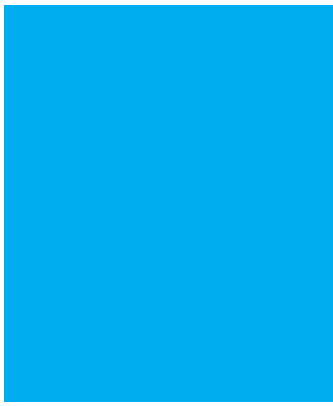
1:00 p.m. - 4:00 p.m.

Join us at for an interesting pontoon boat trip down the beautiful Grass River. Located in the Heart of the Chain of Lakes, the Grass River is a haven for plant and animal life. On this tour Watershed Council Program Director, Grenetta Thomassey and Mark Stone, Antrim County Operator of Dams and Drain Commissioner will explain an exciting "Large Woody Debris" project to address sedimentation issues. We will meet at the Grass River Natural Area, hear about the resource, then take a short walk to the dock to board the pontoons.

Limit: 20 participants

Fee: \$20 member/\$25 non-member

Pre-registration required, please call 231-347-1181.



POLICY INTERN

Victoria Jordan

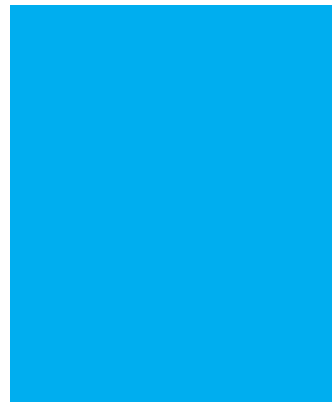
University of Alaska Southeast



POLICY INTERN

Kyla Johnston

University of Chicago



POLICY INTERN

Kaye LaFond

Michigan Technological University



WATERSHED PROTECTION INTERN

Kat Crowley

Michigan State University

Summer Interns:

The Watershed Council welcomes 8 interns to assist heavy summer work load

This summer, we are excited to have eight interns on staff at the Tip of the Mitt Watershed Council. The interns will be working in a variety of fields that will expand their understanding and further their education in areas related to water protection and restoration, environmental policy and advocacy, and communications.

The three policy team interns are each working on a different project this summer. Victoria Jordan, a student at the University of Alaska Southeast, is working on a *Phragmites* project. Kyla Johnston, a University of Chicago student, is doing climate change research. The last member of the policy intern team is Kaye LaFond, a graduate of Michigan Technological University who is writing a literature review on the impact of water quality on local economies.

The watershed protection team also consists of three interns who are all working on water quality testing and various other field surveys including a quagga mussel survey. Kat Crowley is a student at Michigan State University, Meghan Hemken is a master's student at the University of Michigan, and Sara Vaughan is a student at the University of Dayton.

The communications and development interns are Kate Cwikiel, a recent graduate of the University of Michigan, who is working on a video project for the the Watershed Council's 35th Anniversary, as well as gathering stock photos/videos, and assisting with events. Marley Kalt, also a student of the University of Michigan, will be assisting with website content management, event planning, data entry, and writing.

When asked why the interns wanted to work at the Tip of the Mitt Watershed Council, the answers were all very similar in nature. Many of the interns grew up in the Northern Michigan area and "wanted to make a positive difference while working at an organization known for its great work in protecting Northern Michigan's water resources."

The staff is thankful to have such a talented and capable group of interns this year to assist with the work load. Despite their busier than usual schedules, the staff is able to keep up. I guess the old adage "many hands make light work" holds true at the Watershed Council this summer.



WATERSHED PROTECTION INTERN

Meghan Hemken

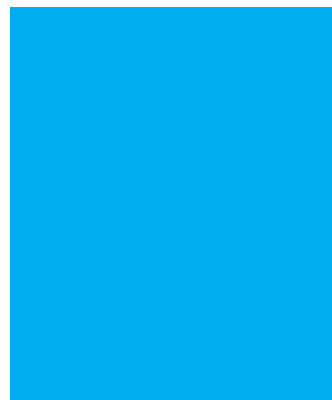
University of Michigan



WATERSHED PROTECTION INTERN

Sara Vaughan

University of Dayton



COMMUNICATIONS INTERN

Kate Cwikiel

University of Michigan

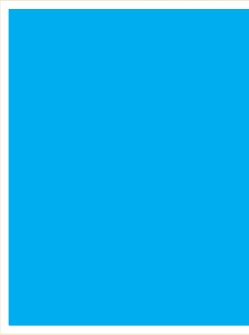


COMMUNICATIONS INTERN

Marley Kalt

University of Michigan

Data Specialist: Watershed Council Welcomes Debbie Esposito to the team



Debbie Esposito is the newest member of the Tip of the Mitt Watershed Council staff. She joined the team of employees in January 2014.

Debbie's primary responsibility with the Watershed Council's database system is to catalogue all of the information that is collected through our water quality surveys and other fieldwork. She also puts her data analytical skills to work updating membership data base so that all of our information on file is as recent as possible. When asked what she enjoys most about working at the Watershed Council, Debbie replied, "I love working with data! And the rest of the staff is great. Everything here is enjoyable."

Outside of the Watershed Council, Debbie and her husband of 21 years have two daughters, 15 and 17 years old. Her hobbies include trail running with their dog Solo, spending time outdoors, and keeping up to date on the latest baseball and soccer games and statistics. Debbie's favorite water related activities are boating, fishing and swimming. "I just love being near and around the water!"

We are excited to welcome Debbie to the team of employees here at the Watershed Council.

Welcome New Members 3/6/14-6/25/14

Mr. Phil Bellfy	Mr. and Mrs. Daniel May
Mr. and Mrs. Jerome J. Capozzoli	Susan and Gary Stewart
Mr. & Mrs. Walter Enterline	Barbara Termaat
Mr. Thomas Gunn	Mr. Edward T. Welcer
Higher Grounds Trading Co	

Honorariums & Memorials

Memorials and Honorariums are a meaningful way to celebrate the memory of a loved one or pay tribute to someone who cares about the preservation of our beautiful water resources.

In Honor of...

David and Alice Joseph
Linda and Rob Barron

In Memory of...

Robert Fullerton Jr.
Erin Vaillancourt
Armand Hewett
Juniper Shore Association
Rick Powers
Mr. and Mrs. James Anderson
Lizbeth Messing
Shirle N. Westwater
Bruce Davis and Heidi Hill



Thank You Volunteers!

We could not accomplish the many tasks and projects that need to be done without the help of our volunteers. We are truly grateful for everyone that rolls up their sleeves and donates their time to the Watershed Council.

RSVP Volunteers - Mailings

Sharon Brown

Andrew Beyer

Assistance with assembling our new display shelves for the front room.

Simon Gelb

Lending a hand with our summer mailings.

Thank You

Pierpont Productions for allowing us to use their professional video equipment to record the Pipeline Symposium and make it available on our website.

Roast & Toast for all the coffee you have supplied for our many meetings and workshops. We can always count on you for our fresh brew.

Emmet Conservation District for donating woody shrubs for Tannery Creek Restoration Project

Ryde Marine for donating pontoon boats for our Oden Island Pontoon Tour, among other things.

North Central Michigan College and animation instructor, **Anne Morningstar**, for creating a special project class to produce our recent POD campaign commercial.

Real People Media for allowing us to borrow equipment to produce our 35th Anniversary video.

**A HUGE Rummage Sale for
Water Recreation Lovers!**

A Whale of a Sale

ONE DAY ONLY

Saturday, July 19, 2014

8:00am - 2:00pm

Live auction for boats starts at Noon.

Irish Boat Shop Storage Building
Fairview Street ~ Harbor Springs
Located behind Meyer Ace Hardware in
Fairview Square on State Road.

**Do you have items to donate?
Call us, (231) 347-1181.**



Proceeds benefit
Tip of the Mitt Watershed Council



426 Bay Street
Petoskey, MI 49770

Address Service Requested

Nonprofit
Organization
U.S. Postage

PAID

Petoskey, MI
Permit No. 108



Matt Claucherty, AmeriCorp Volunteer



Sara Vaughn, Summer Intern

After months of preparing for their arrival the beetles were finally here. We delicately unpacked the contents of the cooler and found them divided into one large "chicken bucket," and three pint-size ice cream containers. The smaller containers were reserved for three lake and stream associations that ordered their own supply of beetles. Representatives from their groups would be arriving shortly to claim their *Galerucella* beetles and venture off to their respective lakes and stream to release the beetles into their new, purple loosestrife-infested homes. The beetles in the larger container would need to be divided into thirds.

After a little chaos during the division process, the sesame seed-sized beetles were ready for deployment into the field. Staff and interns, armed with their supply of beetles, paddled and walked three designated stretches along the Bear River corridor where previous inventories identified heavy purple loosestrife infestations. The beetles were released, one by one, in an ongoing effort to control the spread of this invasive plant along the Bear River, as they are an effective and safe biological control (they only eat purple loosestrife).

So it was with a little sadness that we said goodbye and good luck to our new friends, but we knew they had an important job to do and we needn't keep them waiting any longer.

Thank you to the Petoskey-Harbor Springs Area Community Foundation for supporting the project!

Beetle Collection and Release on Bear River

The FedEx truck pulled up to the office. They had arrived. Staff and interns gathered around the table to greet the visitors. They

had come a long way. From New Jersey... and in a Styrofoam cooler... all 4,250

of them.

