



## Boat Washing Station Protects Paradise

Exciting construction has taken place on the shores of Paradise Lake! We congratulate our friends at the Little Traverse Bay Bands of Odawa Indians (LTBB), working in collaboration with the Michigan Department of Natural Resources (MDNR) and the Paradise Lake Improvement Board (PLIB), for putting the finishing touches on the Paradise Lake Pilot Boat Washing Station Project. A ribbon-cutting ceremony was held Friday, June 7, at the Paradise Lake trail public access and launch, followed by cake and refreshments at the Carp Lake Township Hall.

For years, citizens around Paradise Lake have been fighting to keep invasive Eurasian watermilfoil from taking over and creating a nuisance for recreational uses, such as fishing and boating. Funded by a Great Lakes Restoration Initiative (GLRI) Grant from the U.S. Environmental Protection Agency, this pilot project was created to allow for design and construction of a boat washing station, which is valuable for preventing the spread of aquatic invasive species.

The project also includes conducting surveys for feedback on the use of the boat washing station, and numerous presentations for the community on the process and technology being used with the station. Additionally, the GLRI grant funded preparation

and publication of educational materials about aquatic invasive species prevention and a permanent informational kiosk at the dock. A creative collection of waterproof cards, detailing various invasive species, was created for use by boaters as a way to identify and report invasive species. Other informational cards were also produced regarding invasive species and shoreline management best practices.

Tip of the Mitt Watershed Council served on a Stakeholder's Workgroup devoted to completing the Paradise Lake Pilot Boat Washing Station Project. We also contributed to the project using a generous grant from the Joyce Foundation to create a no-mow shoreline greenbelt and help with installation of a rain garden adjacent to the boat washing station.

The Paradise Lake community, through the PLIB, will pay for operational expenses including power, maintenance, and personnel when the grant is completed. All in all, this was a model of successful partnership and collaboration, and we again offer congratulations to all involved! For additional information on this technology, this project, or feedback please feel free to contact the Project Coordinator, Kira Davis, LTBB Water Quality Specialist at (231) 242-1572 or [kdavis@ltbbodawa-nsn.gov](mailto:kdavis@ltbbodawa-nsn.gov).





426 Bay Street  
Petoskey, MI 49770  
(231) 347-1181 • (231) 347-5928 fax  
[www.watershedcouncil.org](http://www.watershedcouncil.org)

Watershed Council Staff  
Gail Gruenwald,  
Executive Director/Staff Attorney

**Administrative Team**

Lynn D. Buffington,  
Business Manager

Sandy Schreck,  
Office Manager

**Development/Communications**

Kristy Beyer,  
Communications Specialist

**Policy & Advocacy Team**

Grenetta Thomassey, Ph. D.,  
Program Director

Jennifer McKay,  
Policy Specialist

**Watershed Protection Team**

Kevin Cronk,  
Monitoring & Research Coordinator

Jennifer Buchanan Gelb,  
Restoration Ecologist

Dan Myers,  
Water Resource Specialist

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**Gail Gruenwald**  
Executive Director

## Reflections From Our Executive Director

The protection of water resources requires both direct action and improvements in public policy. There are six examples in this newsletter of actions taken by the Watershed Council and our partners which result in concrete protections and improvements in water quality and research and preparation of public policy documents.

The first is the installation of a boat washing station on Paradise Lake made possible by the Little Traverse Bay Bands of Odawa Indians and partners. We are pleased to see the completion of this project, which will prevent further spread of invasive plants and animals to and from Paradise Lake.

The second example is the completion of the third stage of our local water resource ordinance gaps analysis. The Emmet County volume is now available on our website and has been distributed to local officials and others throughout the County, providing very complete and specific guidance to improve local protections for our water resources. The Antrim and Charlevoix County volumes are also on our website and we will complete the Cheboygan County volume within the next twelve months.

We are reducing sediment and nutrient pollution to our water bodies through installation of rain gardens and by surveying and prioritizing road stream crossings that are in need of repair or replacement. Two examples of these restoration actions are the rain garden campaign for the Bay View community and our ongoing road stream crossing survey efforts.

We partnered this past year with a team of students from the School of Natural Resources and Environment at the University of Michigan to develop a restoration plan for Tannery Creek. This plan will lead to action steps to protect this important tributary to Little Traverse Bay.

Finally, two small bays in Cheboygan County, Duncan and Grass Bays, will be the focus of our watershed management team this year as we identify pollution sources and outline a step-by-step plan to correct this pollution. We will combine this plan with an effort to obtain funds for corrective and protective measures.

All of these tasks are part of our overall watershed approach to protecting Northern Michigan's lakes, streams, wetlands, and groundwater. In addition, we monitor pollution incidents like the used cooking oil spill in the Crooked River and inform the public about threats to our waters. We are here 365 days a year to respond to problems and move forward taking actions to protect our waters. Thanks so much for making this critical work possible.

### SAVE THESE DATES...

**July 27** POD Collection Event

**August 24** "Healing the Bear" Bear River Cleanup

**September 7** POD Collection Event

**September 14** Volunteer Stream Monitoring Training Day

**September 18** Volunteer Avian Botulism Monitoring Training Day

**September 21** Volunteer Stream Monitoring Field Day

**October 6** Volunteer Stream Monitoring Indoor ID Day



## Ballast Water and Invasive Species: One Step Forward, One Step Back

The U.S. Environmental Protection Agency (EPA) issued new requirements for ballast water from ocean going ships in an effort to prevent the introduction and spread of exotic species into the Great Lakes region. Under a new general permit, vessels longer than 79 feet must treat ballast water with technology, such as ultraviolet light or chemicals to kill at least some of the organisms. This is an improvement over existing regulations. However, the permit adopts weak international standards and is not strict enough to ensure that the next major invasive species threat is prevented. Additionally, these guidelines don't apply to "Lakers," vessels navigating solely within the Great Lakes, which can still carry exotic species around the lakes even if they weren't responsible for bringing them to the U.S. In addition, the treatment requirements are not effective immediately, but will be phased in for existing vessels over the next decade, with no hard deadline for ships to install systems to clean ballast water.

While the EPA was busy taking this small step forward with ballast water protections, the State of Michigan was taking a step backwards.

Michigan's Ballast Water Control General Permit, the first of its kind in the nation, requires ocean going vessels to treat their ballast water prior to entering Michigan ports. Significant progress has been made in addressing the risk of introduction and spread of invasive species from ship ballast through this general permit.

However, the Michigan Legislature took up a bill recently to weaken Michigan's ballast water law. The Senate bill proposes to roll back our protections and require ballast water exchange alone. Ballast water exchange, or saltwater flushing, is the process of releasing ballast water, then taking on new ballast water intended to achieve a sufficiently high concentration of salt, to kill some invasive species. However, salt water flushing is not a substitute for ballast water treatment because it does not remove or kill all aquatic species from ballast tanks. As a result, this bill would increase the risk of introduction of aquatic invasive species, jeopardizing our economy, environment, and public health.



## Michigan's Wetlands Threatened

The Michigan Legislature moved at rapid speed this spring to gut Michigan's Wetland Program. A bill passed through the legislature and was signed by the Governor, that weakens wetland regulations in Michigan and jeopardizes the State's assumption of the Section 404 program. Michigan has a proud tradition of being one of only two states to administer Section 404 of the Clean Water Act (CWA). In comparison to other states that have separate state and federal wetland permitting programs, Michigan's assumption of the 404 program streamlines the permitting process for property owners in Michigan. To keep the authority to administer Section 404, the State must maintain a program that is equivalent to the federal program administered by the Environmental Protection Agency (EPA).

The EPA conducted a comprehensive review of Michigan's Section 404 program and found numerous deficiencies in the program's administration. For Michigan to keep administering the 404 program, it had to take corrective actions. A bill was introduced last year with the primary purpose of correcting those deficiencies. However, the end result was a bill full of political favors including permit exemptions, reduced mitigation requirements, and a whole host of provisions that reduce environmental protections. The EPA reviewed the legislation and concluded it introduces new problems that place Michigan in the same position – we still risk losing the program to the federal government. In the end, we are left with less protection for Michigan's wetlands and a program that is still not compliant with federal law. This is one more example of how our current legislature and administration are creating a legacy of environmental destruction.

# AQUAVIST NETWORK

**Aquavist** ('ä-kw-vist) noun: A member of Tip of the Mitt Watershed Council's Local Activist Network; from Aqua - water, and Activist - one who seeks change through action.

## DUNCAN AND GRASS BAYS WATERSHED PLAN

We are excited to report that work is underway to create a new watershed management plan for Duncan and Grass Bays! This new plan will provide a framework for addressing nonpoint source pollution within these watersheds.

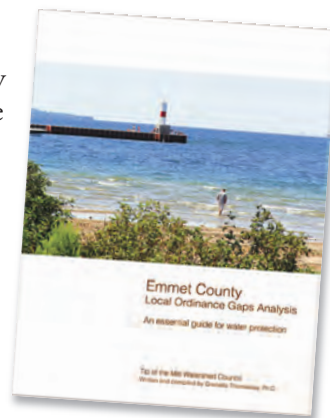
These bays are located on Lake Huron, east of the City of Cheboygan. Duncan Bay encompasses approximately 680 acres of surface water and Grass Bay covers nearly 1,250 acres. They fall outside of the Cheboygan River Watershed, so there have been no watershed protection plan activities to date. The Cheboygan River Watershed also does not include the eastern portion of the City, but a plan for Duncan Bay will.

Our Watershed Protection Team is doing a comprehensive field assessment, documenting nonpoint source pollution originating from numerous sources, such as urban stormwater, eroding stream banks, and road stream crossings. The result will be a complete dataset for major nonpoint source pollution, providing critical information for writing an effective watershed management plan.

Additionally, we are working with Michigan State University Extension to do a series of focus groups in these watersheds, talking to local officials, businesses, and individuals. Stay tuned – there will be lots more information on this work, funded by a grant from the Michigan Department of Environmental Quality and U.S. Environmental Protection Agency.

## EMMET COUNTY GAPS ANALYSIS RELEASED!

On April 25, the Little Traverse Bay Watershed Plan Advisory Committee hosted its 2nd Annual Local Government Event, featuring release of the Emmet County Local Ordinance Gaps Analysis. The goal of the Gaps Analysis project is to evaluate existing water-related ordinances in our four county service area. The analysis is done at the county, city, and township levels to determine if existing water-related zoning is strong, adequate, weak, or missing.



This is the third in a four volume series covering the Watershed Council's local service area. Antrim County was completed in 2011, and Charlevoix County was released last year. The final volume for Cheboygan County is being worked on now. All volumes are available on our website under the "Publications" tab.

Visit your Aquavist website at [www.watershedcouncil.org/aquavists](http://www.watershedcouncil.org/aquavists). For more information, contact Grenetta Thomassey, Program Director at [grenetta@watershedcouncil.org](mailto:grenetta@watershedcouncil.org) or (231) 347-1181 ext. 118.

## Tannery Creek Watershed Plan Project Completed

In previous newsletters, we reported on five graduate students from the University of Michigan School of Natural Resources and Environment (SNRE) who worked with us on a "Crucial Creeks" project devoted to Tannery Creek. This is the first in what we hope will be a series of Crucial Creek projects for the Tip of the Mitt Watershed Council region. A focus on restoration and protection of minor tributaries can contribute to enhancement of water quality and ecosystems throughout the Great Lakes region.

Located almost entirely in Bear Creek Township, Tannery Creek's headwaters form near Atkins Road and Maplewood Drive. The upper reaches of the creek tend to be more pristine, because those areas are more rural and undeveloped. The lower sections are impacted by commercial and residential development, where the creek crosses U.S. 31 and eventually flows into Little Traverse Bay, behind the Glen's Market plaza.

The SNRE Team performed a watershed-wide field assessment of Tannery Creek, and worked with local residents and



businesses along the Creek to develop a watershed management plan. Their work included extensive surveys and two town hall meetings to present results to watershed residents.

These student researchers (above) Leah Zimmerman, Bo Williams, Julie Riggio, Elizabeth Lillard, and Diana Portner produced excellent products for us. They presented both the completed watershed plan, plus a template for an award program for businesses that employ best management practices that protect Little Traverse Bay.

We thank them for a job well done!!



## Down the "Storm" Drain

On Tuesday evening, June 11th, a truck turned over on US31 in Alanson, dumping over 2,000 gallons of used cooking oil onto the road. The oil proceeded to flow into a nearby storm drain connected to the Crooked River. Upon learning of the accident, the Watershed Council contacted the Michigan Department of Environmental Quality (DEQ) to inquire into what happened and what was being done in response. Unfortunately, there is nothing in place in the Alanson stormwater system to slow, reduce, or halt the flow and, therefore, most of the oil drained into the river. However, the DEQ and United States Environmental Protection Agency (EPA) were soon on site, and crews were on the ground containing and cleaning the spill within 24 hours. The Watershed Council assisted with efforts by monitoring the river's water quality.

In terms of water quality and ecosystem impacts, our primary concerns were oxygen depletion and smothering and suffocation of surface-dwelling organisms. Thus, our boat, the H<sub>2</sub>O Observer was loaded with equipment and launched on the Crooked River at 5:30 p.m. on June 12th, just upstream of ground zero – where the oil entered the river from the storm sewer. Booms, floating barriers to contain the oil, were observed at a few locations in side-channels near ground zero and crews were busy skimming oil off the water. After conferring with EPA staff, who were appreciative of the Watershed Council's involvement, water samples were collected and dissolved oxygen monitored for two miles downstream of ground zero. Although the river's surface was covered by an unsightly sheen of oil and food globules, and smelled like a neglected deep fryer, the oxygen levels below the surface remained high. Of the area monitored, the worst seemed to be from the Crooked River Lodge downstream where the river's flow slowed, and

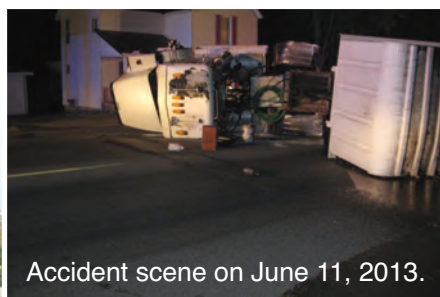


oil collected in the emergent vegetation of the margins. There were no visible impacts to wildlife in the river; no waterfowl struggling in the oil or fish floating at the surface.

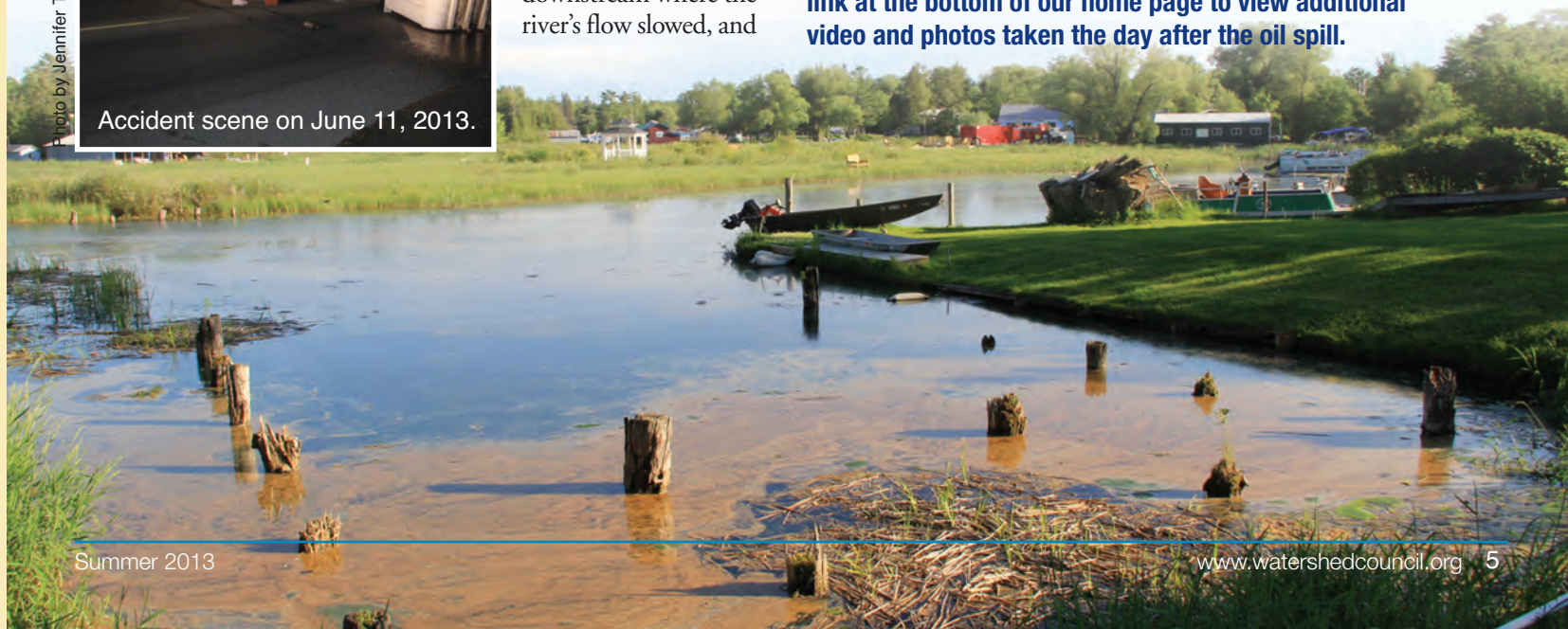


Fearing delayed impacts to oxygen levels as the oil and food material decomposed, Watershed Council staff took another trip down the river on the afternoon of June 14th. Starting again at ground zero, we monitored the river all the way to Burt Lake. Clean-up crews were observed up and down the river, skimming oil from the water surface and placing absorbent pads in the emergent vegetation. Booms were also in place mid-way down the river at Mission Road and at the outlet to Burt Lake. Although there were some slight drops in dissolved oxygen concentrations at sites previously monitored, levels were far above State of Michigan standards throughout the entire river. The awful smell of rancid oil so prevalent two days before, as well as the thick sheen of oil on the water, was notably decreased. Thanks to the rapid response by agency personnel and clean-up crews and the resiliency of our healthy waters, the spill appeared to have minimal impacts on the Crooked River's water quality and wildlife.

**Visit [www.watershedcouncil.org](http://www.watershedcouncil.org) and click on the YouTube link at the bottom of our home page to view additional video and photos taken the day after the oil spill.**



Accident scene on June 11, 2013.





## Do you really care?

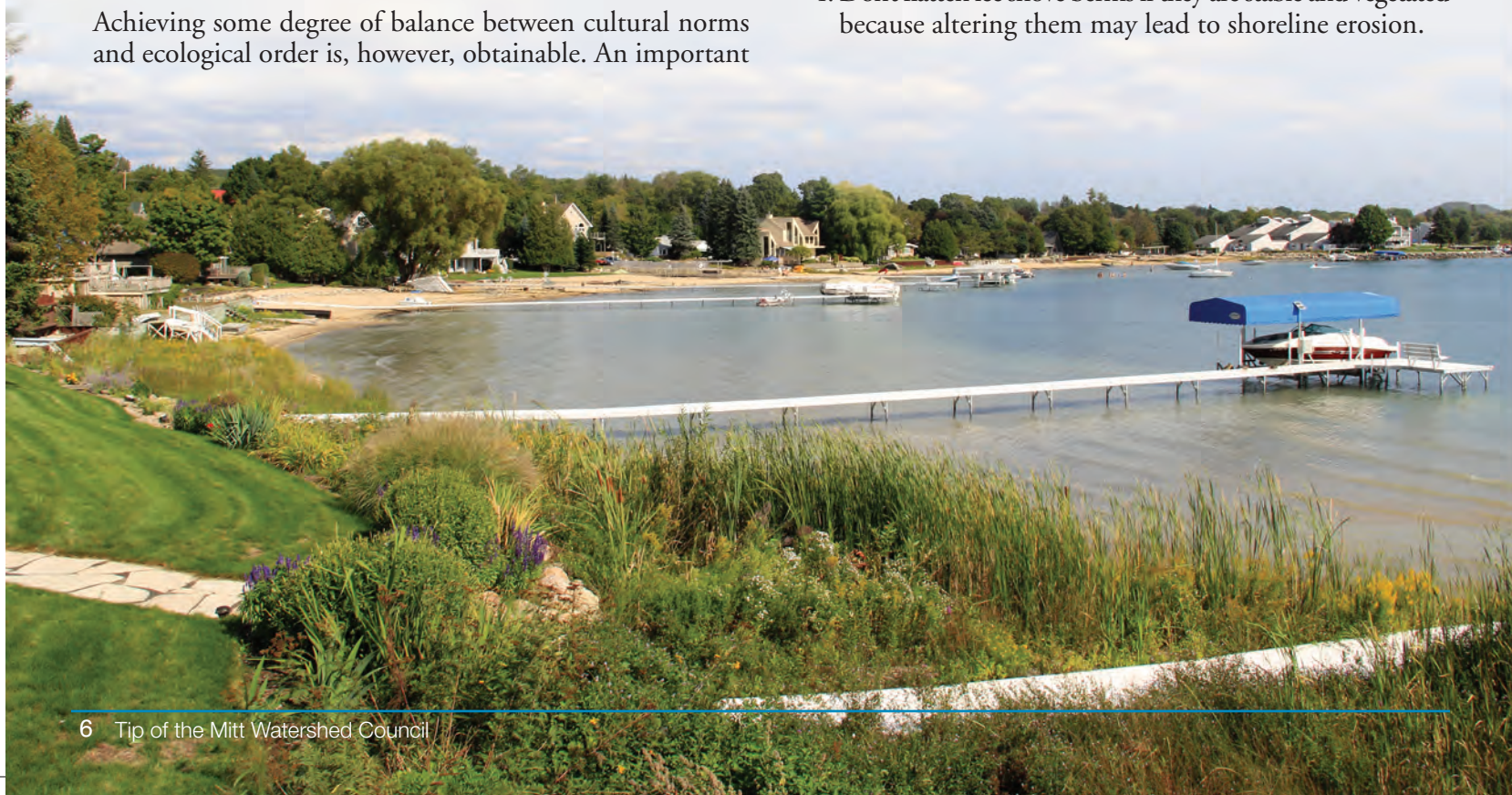
What we do with our lawns, lakeshores, and landscapes has more to do with our neighbors and communities than with environmental attitudes and beliefs. Landscape Architecture Professor Joan Iverson Nassauer of the University of Michigan has studied the phenomenon and discovered that when it comes to our landscapes, we are driven by cultural norms more than ecological health. In a nutshell: the appearance of our landscapes reflects our personal character. And so we mow, prune, trim, weed, mulch, water, plant, fertilize, and weed whip our landscapes into neat and tidy, colorful and contained, orderly and managed yards that we hope reflect who we are: hardworking, thoughtful, good citizens who care.

When it comes to shorelines, however, traditional landscape practices can be detrimental to lake health. A neat and tidy lakeshore may reflect our hard-working nature, but they are not in the best interest of the resource. Consider a natural shoreline: undisturbed and untouched. Emergent vegetation grows along the shallow lake margin, toppled trees lie submerged in the lake and their upright neighbors remain, for now, offering shade and cooling water temperatures. Organic, or “mucky,” lake bottoms sustain populations of macroinvertebrates, which in turn provide food for other wildlife. Submerged rocks shift with waves and ice over the seasons. There isn’t much “neatness” to this picture, but there is order: ecological order.

Achieving some degree of balance between cultural norms and ecological order is, however, obtainable. An important

concept from Nassauer’s research is termed “cues to care,” or things you can do with a landscape that let people know that you are actually caring for it. These cues can be formal, casual, functional, or frivolous. They can be big or small, but they have to be noticeable to a casual observer. They have to provide some sort of evidence that you care for your landscape. You can easily include traditional cues to care in your “lakescape” by incorporating pathways, maintaining a crisp edge between lawn and your greenbelt (or other landscaped or no-mow areas), and by adding the occasional bench, birdhouse, or other accent. We know you care, but consider how to show it by trying these lakescape-centric cues. We promise your lake will approve!

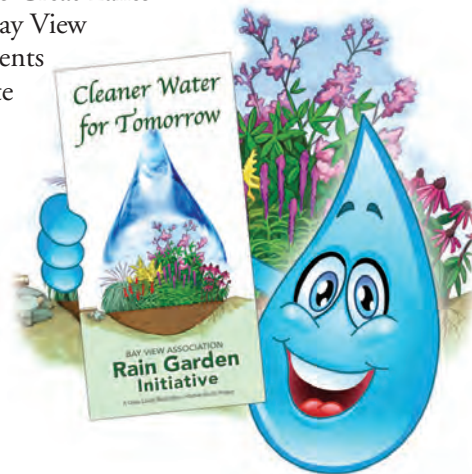
1. Allow emergent plants, such as bulrushes or ‘reeds’, to grow along the shoreline. They help buffer wave energy, break up the ice cover, and provide critical habitat for fish, invertebrates, and birds.
2. If a tree falls in the lake, leave it. Resist the temptation to remove fallen trees. Trees in the lake are essential to a lake’s “carbon diet,” plus they offer valuable habitat.
3. If you don’t already have a greenbelt, a strip of vegetation that is either deliberately planted or allowed to naturally grow along the shoreline, then get growing!
4. Don’t flatten ice shove berms if they are stable and vegetated because altering them may lead to shoreline erosion.





## Bay View Rain Garden Initiative

Tip of the Mitt Watershed Council, in partnership with Bay View Association, is encouraging Bay View Association residents to install rain gardens to help reduce local stormwater impacts. As part of the Watershed Council's Little Traverse Bay Stormwater Management Initiative project (supported with funding through the Environmental Protection Agency's Great Lakes Restoration Initiative and the Petoskey-Harbor Springs Area Community Foundation), The Bay View Association Rain Garden Initiative will provide reimbursement for up to 25 Bay View residents who install a rain garden as part of the Initiative. Interested residents must first arrange a site assessment with Watershed Council staff, who will determine if a rain garden is appropriate for the given site. If the site is selected, the Watershed Council will coordinate the design and installation with the rain garden project contractor and resident(s). Residents will contract directly with the rain garden project contractor. Reimbursement of \$1,500 per rain garden (limit one rain garden per residence) will be made to each resident from the Watershed Council, upon a post-construction rain garden review. Any additional costs associated with the rain garden will be the responsibility of the resident. Several rain gardens have been completed, but we have funding for many more. For more information regarding the Bay View Rain Garden Initiative and to schedule your site assessment, contact Jen Gelb at (231) 347-1181, ext. 112.



## BRANCHING OUT: Add shrubs without disturbing your shoreline

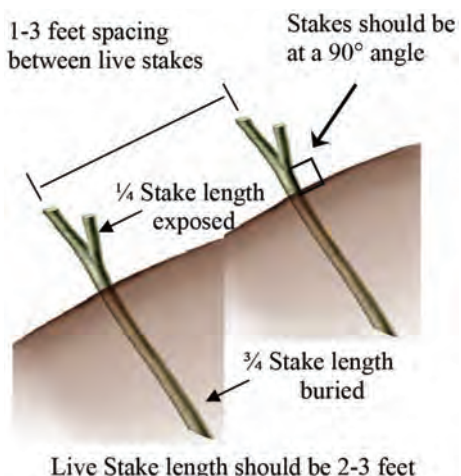
You want to add some shrubs to your shoreline or streambank, but you don't want to disturb the soil too much or spend a lot of money? If so, consider planting live stakes. Live stakes are rootless, branchless, woody cuttings from common shrub species that are driven into the ground and, over time, will root and develop into a full size shrub. The most common species used are willows and dogwoods. Live stakes should be collected while they are dormant (i.e. early spring or late fall).

Here's what you do:

1. Locate a harvest site with an abundance of willows or dogwoods. Make sure you have the property owner's permission to selectively remove the cuttings!
2. Choose branches that are 2'-3' long with a diameter of about 1/2"-1". You can cut longer branches into multiple stakes.
3. For each stake, cut the top end straight across and the bottom at a diagonal for easier installation (and identification of which end to plant!). You can also dip the tops into latex paint to seal the ends and prevent the stakes from cracking and drying.
4. Remove any lateral branches.
5. If you cannot install them immediately after collection, store them in bucket of water in a shaded area for up to two weeks.
6. Use a piece of rebar or metal rod to create a pilot hole in the ground at a right angle to the slope. If possible, holes should extend into soils where moisture will be readily available.
7. Carefully drive the stake into the hole using a rubber mallet. Leave the top 1/3 of the stake aboveground.



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## What Are RSX's and Why Are They Important?

“RSX” stands for a road/stream crossing, but it is much easier to write, and so you’ll find the abbreviation written time and time again in our grant proposals, emails, spreadsheets, and work plans. Road/stream crossings are the bridges and culverts we travel over every day, as we pass from one side of a river or stream to the other. Most times we pass over them without much thought. However, RSXs are a major source of sediments to our rivers. Undersized culverts, recreational access, and road maintenance practices can all contribute to erosion and sediment loading of streams. Furthermore, RSXs can impede fish and other aquatic organisms’ passage. RSXs can also slow and impound waters upstream, thereby, causing warmer water temperatures and flooding.

The Watershed Council, and other resource agencies and groups periodically inventory RSXs, in order to assess conditions as they relate to water quality and habitat. Thanks to support from the Baiardi Foundation and the Petoskey-Harbor Springs Area Community Foundation’s Little Traverse Bay Protection and Restoration Fund, the Watershed Council is currently inventorying all of the RSXs within the Little Traverse Bay Watershed. Data is collected and conditions are noted for the road and structure types, dimensions, and conditions, as well as stream flow, characteristics, and conditions. Photos and sketches round out the inventory. Data is then entered into a database and will ultimately be shared online at [www.northernmichiganstreams.org](http://www.northernmichiganstreams.org), an Internet repository of RSX information in Northern Michigan.



This small culvert which allows the Tannery Creek to flow under the bike path along Little Traverse Bay will be replaced with a free-span bridge in the fall of 2013.

Once the Little Traverse Bay RSX Inventory is completed, the Watershed Council will categorize each site as a minor, moderate, or severe threat. Severe sites are then given priority for repair or restoration, as they have the greatest potential to impact water quality and stream habitat. Restoration of these sites may include stabilization of embankments, replacement of culverts, or installation of channel-spanning bridges. Subsequently, the Watershed Council will pursue funds to develop engineering solutions for the most severe sites, and then work toward implementing the most critical RSX improvement projects.



A grant from the Great Lakes Restoration Initiative allowed the Watershed Council to replace the culverts on Click Road in Petoskey with this free-span bridge.



# The Secret Life of Clams

*Guest article by Bob Pillsbury  
University of Michigan Biological Station*

Clams are amazing, in spite of being hidden behind two drab shells, half-buried in mud, and often mistaken for a rock. As a child, I pulled mussels from the shallows and watched with curiosity as they squirted water in alarm and retracted their pale bodies into their shells. I collected discarded shells by the bucket to decorate sand castles or examine their features later. Little did I know that these creatures lead amazing lives and that their presence in North America gives the entire continent an air of distinction.

*"...70% of our species are in some sort of trouble..."*

The calm and steady existence of a clam allows some to reach over 80 years of age, living as "happy as a clam." Clams spend their adult lives filtering water, extracting edible bits of algae. They are found half-buried in

the sediment and use their muscular "foot" to move around and anchor themselves. When trouble strikes, they simply pull all extremities into their shell and sit tight until the coast is clear. Shell sizes range from a few millimeters to over a foot. The outside of the shell varies from a pale white, yellow, or green, to brown color. The inside is composed of mother-of-pearl and varies from pearly white and pink to dark purple.

Just as Madagascar is known for its diversity of lemurs, North America is known as a hotbed of clam diversity. To get a feel for this great diversity, consider the wonderfully odd variety of their common names: Fat Muckets, Heelsplitters, Elktoes, Spectaclecases, Lilliputs, Purple Wartybacks, and Snuffboxes. There are over 300 species of clams native to North America; most

found east of the Rockies. This is much more than any other continent. In comparison, South America has 184 species, Africa 82, Australia 33, and Europe and Asia combined only have 285 species.

If you want to appreciate this rich variety so unique to our continent, do it quickly! A full 70% of our species are in some sort of trouble (7% are thought extinct, 26% endangered, 14% threatened, and 24% of special concern). There are several causes for this recent and dramatic decline. Early on, many clam populations were over-harvested from our major rivers to make buttons. As the landscape changed from natural to farmland and cities, silt has increased in our rivers and lakes, which is hard for our filter-feeding friends to handle. Lastly, the invasive zebra mussel has become a serious threat to native clams, due to competition for plankton and its high reproduction rate. Zebra mussels also attach to the shells of native clams in great numbers, making it hard for them to move and properly close their shells. This silent battle for mussel dominance has spread across most of our lakes and rivers, and our native clams are losing.

So what does the future look like for our native clams? It's hard to say, but there are conservation groups trying to preserve our mussel legacy. For my part, every time I come across a native clam encrusted with zebra mussels, I "shuck" the invasive mussels off and throw them into the woods. Then I carefully return the native mussel and hope to see it again next year, or next decade, or maybe it will be discovered again by my children, 40 years from now.

## SCIENCE CORNER: Bryozoans

Have you ever come across a translucent jelly-like blob in the water and wondered what it was? Kids often refer to them as water boogers and some speculate that they may be alien life forms. These peculiar creatures that inhabit our lakes are actually a type of invertebrate called moss animals or in scientific terms "bryozoans." Individual bryozoans are, on average about the size of the lead point of a mechanical pencil, though they form large gelatinous colonies that can reach sizes greater than a basketball.

Worldwide there are some 5,000 species of bryozoans, most inhabiting marine environments, but in Michigan, we have only 18 recorded species. Although typically found in ponds and small lakes, they occasionally wash up after storms in larger lakes. They can thrive in the harshest conditions by reproducing asexually during long periods of dormancy. Bryozoans are important in terms of water quality because they are living filters, feeding on algae, zooplankton and even bacteria like *E. coli*. They are also a source of food, preyed on by snails, insects, and fish. Furthermore, bryozoans produce a variety of chemical compounds, some of which are currently being tested for treatment of cancer and Alzheimer's disease. Thus, these oddities in our aquatic ecosystem are important for the health of our lakes and may prove to be important for our own health, as well.



Photo Credit: NANFA







## Six Summer Interns Join the Watershed Council



**Anne Strawbridge**  
Policy Intern

Each summer, Tip of the Mitt Watershed Council welcomes a new group of college students from across the country to participate in an educational experience unlike any other. Each intern spends their summer at the Watershed Council broadening their understanding and appreciation of water related protection, restoration, and advocacy in a very hands-on environment that is compatible with their career path. This year the Watershed Council welcomed six new interns.

Anne Strawbridge, a second year law student at Michigan State University: College of Law, and Daniel Shumway, a senior political science and public management student studying at Lake Superior State University, teamed up with our Policy and Advocacy team. They are assisting with research on a wide variety of issues, including the Cheboygan County gaps analysis project.



**Daniel Shumway**  
Policy Intern

The Watershed Protection Team welcomed three interns this summer: Meredith Cote, a senior studying environment/water resource engineering at the University of Michigan; Nicole Bieganowski, a senior studying ecological engineering at the Ohio State University; and Annie Rouse, a 2nd year masters candidate studying business administration and international environmental policy at the Monterey Institute of International Studies. You will see these students in the field performing water monitoring, doing research, working on the installation of rain gardens, and many other tasks. Having three interns doubled the team allowing them to tackle more than ever this summer.

Samantha Christian, a senior studying Sustainability at Arizona State University, joined the Communications and Development Team. She is assisting with a major video project, helping with our summer fundraisers, and learning about the many channels of marketing that the Watershed Council uses to keep the public informed.

When asked why they chose to do their summer internship at the Watershed Council they all responded similarly. They wanted “to make a positive impact,” “enjoy their summer in a beautiful place,” and they “strongly believe in the work the organization does to keep Northern Michigan beautiful for generations to come.”



**Meredith Cote**  
Watershed Protection Team Intern



**Nicole Bieganowski**  
Watershed Protection Team Intern



**Annie Rouse**  
Watershed Protection Team Intern



**Samantha Christian**  
Communications Intern



## Beetle Harvesting

*Guest article by Susan Page, President of Twin Lakes Association and veteran beetle collector*

On June 12, five intrepid residents of Twin Lakes (Cheboygan County) participated in an adventure with the Watershed Council's Jennifer Gelb and her posse of summer interns. The mission was to collect *Galerucella* beetles. These insects eat the leaves of purple loosestrife, a beautiful, but invasive plant that can clog waterways and force out native species.

Donning waders, our "beetle collection devices" in hand (i.e., two-liter plastic pop bottles with the tops removed, then inverted back onto the base of the bottle), we slid down the hill. The swampy locale tested our ability to simultaneously balance, pull our submerged boots from muck, locate beetles, and then shake the plants until the insects fell safely into the inverted neck of the bottle.

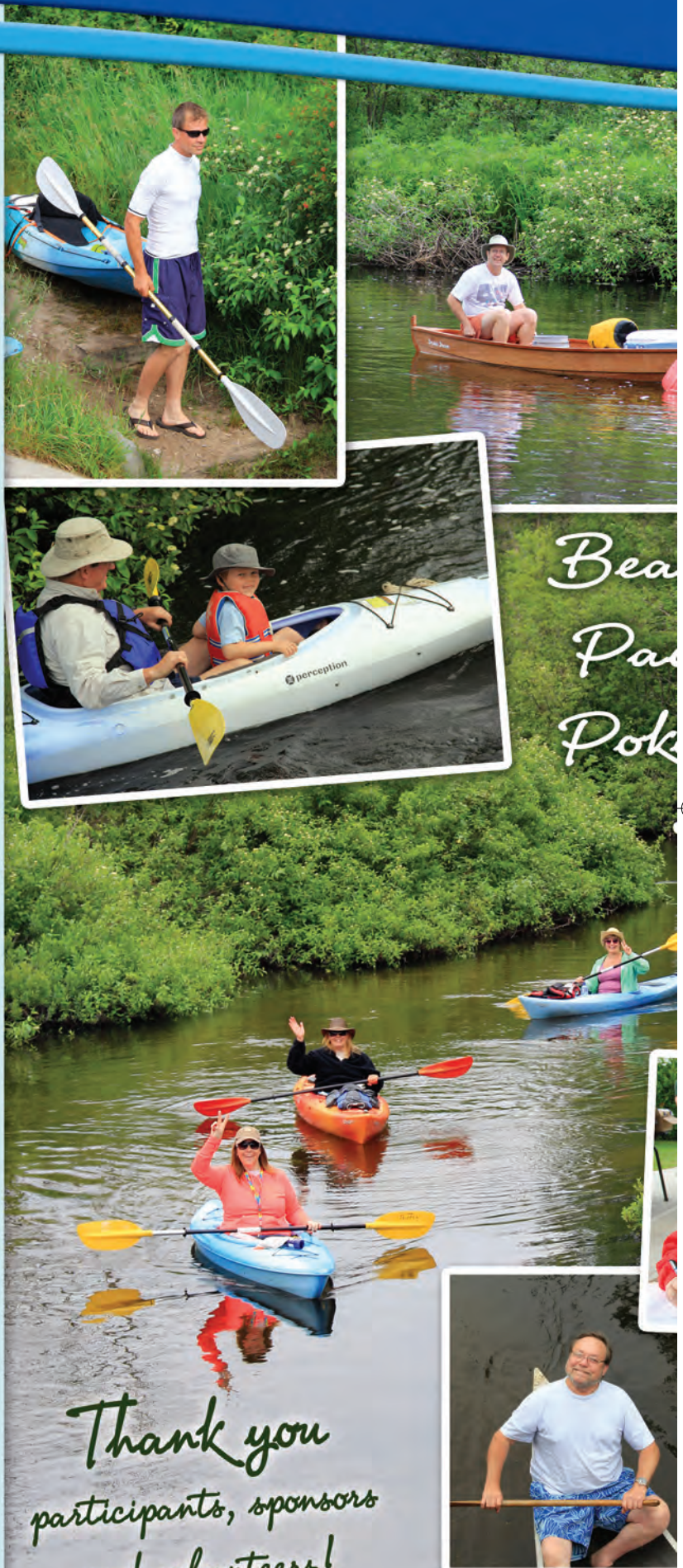
Conditions were excellent for the beetle harvest. The insects, smaller than houseflies, were put in a cooler for their journey to their new home on Twin Lakes. An hour later, they were released into the purple loosestrife beds on our lake.

The Twin Lakes Association has participated in the Tip of the Mitt Watershed Council beetle collection event for five years. Our stands of purple loosestrife are smaller and weaker since the introduction of the beetles. Telltale signs like chewed and shriveled leaves show that the insects are doing their jobs! This event is yet another reason to be grateful to the Watershed Council for their support of our efforts to keep our lakes healthy.

I think the Watershed Council should definitely think about making the beetle collection adventure the basis for a T.V. series, along the lines of "Survivor"!



Our 2013 Beetle Collection team.







Petoskey Rocks!



Petoskey Rocks!



Learning Garden at Raven Hill

## Education & Outreach



Lake Association Summit

Kevin Cronk updated attendees on the progress of the Crooked River oil spill. Presentations included information on fisheries and also grants and funding opportunities.



Volunteer Lake Monitoring Training

Volunteer lake monitors gathered for a day of training. Kevin educated the team on the science of the program and the importance of accuracy and consistency while sampling.



Eurasian Watermilfoil Discussion

Attendees familiarize themselves with the difference between non-native (invasive) and native Eurasian Watermilfoil.



Kevin Cronk, a panelist at the Antrim County gathering, discussed the impacts of Eurasian Watermilfoil and the different eradication efforts in Northern Michigan.



## Welcome New Members

3/22/13-7/3/13

WAITING FOR LIST FROM LYNN D for this page

## 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 .....

IN MEMORY OF.....



### Join our facebook "Group"

Receive up-to-date alerts on important issues, invitations to upcoming events and volunteer opportunities.

[www.facebook.com/#!/groups/watershedcouncil/](http://www.facebook.com/#!/groups/watershedcouncil/)



## Thank You Volunteers!

We could not accomplish the many tasks and projects that need to be done without the help of our many volunteers.

### RSVP Volunteers - Mailings

Name here??

## Thank You

Emmet Conservation District for donating shrubs for our greenbelt projects.

U.S. Inc. for funding a staff member to attend the Aquatic Plants mini-course.

Johan's Bakery for providing refreshments for Volunteer Lake Monitoring training session.

Roast & Toast for providing coffee for our educational meetings and event.

North Central Michigan College and Kathy Germain for use of the science lab and equipment.

\_\_\_\_\_ construction and installation of cabinet in front room.

## Thank You

### Bear River Paddling Poker Run Sponsors and Volunteers

Pirates Cove of Petoskey

Petoskey News Review

Bearcub Outfitters

Stafford's Crooked River Lodge

Bay View Association

Plath's Meats of Petoskey

Roast & Toast

Brian Bennett

Alan Beyer

Andrew Beyer

Amy Bieganowski

Samantha Christian

Wil Cwikiel

Meredith Cote

Annie Rouse

Daniel Shumway

## Wanted for Charlevoix and Emmet Counties Avian botulism "Beach Rangers"

Last fall, avian botulism outbreaks resulted in the deaths of over 950 birds along the Lake Michigan shoreline of Charlevoix and Emmet Counties, including 430 loons. Avian botulism is a toxin produced in decomposing algae that, through an ecological chain of events, can accumulate to fatal levels in the bodies of shorebirds and other wildlife. The question remains: is there a way to "break the chain" and prevent these mass fatalities? Volunteer "Beach Rangers" patrol the shoreline each fall and collect data that will ultimately help answer that very important question. We are in great need of additional Beach Rangers in Emmet and Charlevoix Counties to patrol currently unmonitored sections of shoreline, especially in Charlevoix County. If you are interested in joining the team, or would like additional information about the monitoring, contact Dan Myers at (231) 347-1181 x116 or [dan@watershedcouncil.org](mailto:dan@watershedcouncil.org).

**Live in Antrim County?** Monitoring in Antrim County is conducted by a partner organization, the Loon Network. For more information about their program, visit <http://loonnetwork.org>.

## Help Protect/Improve Pickerel and Crooked Lakes!

The Pickerel-Crooked Lake Association is sponsoring follow up work to the 2012 shoreline survey performed by the Watershed Council. If you live on Crooked or Pickerel Lakes and received a questionnaire, please fill it out completely and return to the Watershed Council office at 426 Bay Street, Petoskey, MI 49770. You can also fill it out online at: <http://tinyurl.com/mjlmmsgw>. If you did not receive a letter or lost it, please contact Kevin Cronk at (231) 347-1181 ext. 109 or [kevin@watershedcouncil.org](mailto:kevin@watershedcouncil.org) to request a copy or to learn more about the survey and results. YOUR participation is needed to help protect and improve the water quality and ecosystem health of Pickerel and Crooked Lakes!



This place is crawling with excitement.

Dan Myers (left) and summer intern Samantha Christian (right) won't soon forget the afternoon they spent volunteering at the Raven Hill Discovery Center in East Jordan. Snakes, spiders, and more entertained everyone.







426 Bay Street  
Petoskey, MI 49770

Address Service Requested

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Petoskey, MI  
Permit No. 108



**Saturday, July 27, 2013**  
**9:00am - Noon**

**Emmet County Drop-off Center**  
Pleasantview Road, Harbor Springs

Keep unwanted prescriptions and  
over-the-counter medications out of our waters.  
Drop them off at the POD Collection Event.



Printed on recycled paper  
to protect our waters.

**Help us protect what you love by spreading the word about our  
projects and volunteer opportunities. When you're done reading  
this issue, please pass it along your friends and neighbors.**

**Visit [www.watershedcouncil.org/events](http://www.watershedcouncil.org/events) or call (231) 347-1181 for additional details.**



a perk of being included in the region-wide Northern Michigan  
RiverSweep event, which includes cleanups of the Boyne, Maple,  
Sturgeon, and possibly Jordan River on the same day.  
If you would like to participate in this family-friendly event, contact  
Dan Myers at (231) 347-1181 x116 or [dan@watershedcouncil.org](mailto:dan@watershedcouncil.org).

Father of the modern wildlife conservation movement, Aldo Leopold,  
wrote "the good life of any river may depend on the perception  
of its music; and the preservation of some music to perceive."  
Those who have recreated on the Bear River have heard this  
music as jumping steelhead near its mouth, the roaring whitewater  
in its lower reaches, beautiful plants along the walkways, or the  
solitude of paddling its upper waters.  
However, this music is often interrupted by the presence of trash  
that accumulates along the river's banks and gets caught in pools  
and overhanging vegetation. This trash can alter enjoyment of  
the river altogether. Please consider joining us for this summer's  
"Healing the Bear" Bear River Cleanup to clean up all this trash.  
The Watershed Council is currently seeking families, friends, and  
individuals who are willing to help and up for an adventure. Will you  
join us in "preserving the music" of this treasured water resource?  
The cleanup will be held on **Saturday, August 24 at 9:30am**  
at the Bear River Shelter in Petoskey, underneath the US 31  
Mitchell Street bridge. Lunch and refreshments will be provided,  
as well as a free t-shirt for those who register. Participants are also  
invited to an after-event evening barbecue at Boyne Outfitters—

## **VOLUNTEERS NEEDED: "Healing the Bear" Bear River Cleanup**