

# Current Reflections

SPRING 2012



## WATERSHED MANAGEMENT: What's Going On?

**Watershed** noun (wô t r-sh d): An area of land that drains to a specific water body; all land in that area "sheds" water to a specific outlet. Watersheds come in all shapes and sizes, and cross county, state, and national boundaries.

**Council** noun (koun-suhl): A federation of organizations, or a central body uniting a group of organizations

Tip of the Mitt Watershed Council takes its name very seriously. We take care of watersheds in our local service area of Antrim, Charlevoix, Emmet, and Cheboygan Counties in three important ways.

First, we secure funds for both writing and implementing Watershed Management Plans, which are strategies and work plans to accomplish water resource goals. They include resource inventories, analysis, action steps, and partnerships. We are involved in watershed planning efforts in four large local watersheds: The Elk River Chain of Lakes (ERCOL), Lake Charlevoix, Little Traverse Bay, and the Cheboygan River.

Second, we also take responsibility for creating, administering, and engaging Watershed Plan Advisory Committees, which meet at least four times a year and are made up of stakeholders including natural resource agencies, local government representatives, citizen groups, and interested citizens. These committees are formed when the plan is originally written, but new partners are always welcome. Watershed Plans normally have a 10-year lifespan. After 10 years they need to be updated to remain relevant. There is a lot of work to be done. The more partners, the better!

Third, we ensure that Watershed Plans get implemented, once they achieve approval by the US Environmental Protection Agency (USEPA) and Michigan Department of Environmental Quality (MDEQ). We convene Advisory Committee meetings, foster partnerships, identify implementation steps, get agreement, and get the work done.

Here is an update on work in each of the four large watersheds, mentioned above:

### Elk River Chain of Lakes (ERCOL)

The Watershed Center Grand Traverse Bay also works in Antrim County and we team up with them regularly. They wrote and

secured approval for the Grand Traverse Bay Watershed Management Plan, which also includes implementation steps specific to the ERCOL. In November 2010, the two organizations convened a Watershed Plan Implementation Team (WPIT) consisting of plan partners, new stakeholders, and interested citizens.

The WPIT got busy right away, with Three Lakes Association, Elk-Skegemog Lakes Association, Intermediate Lake Association, and Friends of Clam Lake providing early leadership. These groups and others formed subcommittees to address sedimentation issues for the Grass and Rapid Rivers. They also created a Fish Shelter Subcommittee to improve habitat for recreational fishing. Finally, at the end of their first year, in November 2011, the WPIT hosted a well-attended Local Government Annual Meeting to showcase the Watershed Plan; unveil the Antrim County Local Ordinance Gaps Analysis; and review the work of the subcommittees.

### Lake Charlevoix

We are completing a grant project to update the Lake Charlevoix Watershed Management Plan, and awaiting approval from MDEQ/USEPA. Additionally, this grant funded an extensive survey by Michigan State University Extension on attitudes and beliefs about the watershed and water quality. It also funded completion of the Charlevoix County Local Ordinance Gaps Analysis; workshops by Northwest Michigan Council of Governments for local officials about the Gaps Analysis; and installation of a cutting-edge Best Management Practice (BMP) by the Antrim Conservation District, who also conducted a BMPs seminar for road commission officials in the watershed.

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## **Reflections from Our Director**

Often-times global issues and concerns seem too big to address from our Northern Michigan home. Global climate change is one such issue. Like politics and religion, there are some that believe we shouldn't talk about climate change since the science of the issue often gets consumed with the politics of what to do about it. Interestingly, I have noticed this winter that while the meteorologists on the weather channel on TV express their amazement about the incredibly warm temperatures that the United States has experienced this winter, they never mention the long term changes in our weather patterns or say the words – climate change.

As you will read in the article on page 11 the Watershed Council believes that no matter what the nuances of the cause or political solutions to this growing concern, we need to be prepared to protect our resources from future impacts. There is a direct relationship between healthy ecosystems and withstanding the impacts of climate change. Keeping our lakes, streams, and wetlands healthy is the best defense from the impacts of changing water levels, rising temperature, and shifting flora and fauna. How do we accomplish that? Through watershed protection and restoration – in a nutshell -- the work of the Watershed Council.

Each article in this newsletter describes programs that improve the health of our waters and increases our region's resistance to climate change. These programs include our extensive work developing and implementing watershed management plans, our education on limiting phosphorous inputs into our water bodies, our program expansion to keep pharmaceuticals from compromising the health of our lakes and streams, our efforts addressing invasive plants like Eurasian watermilfoil, our programs ensuring the integrity and strength of our shorelines through erosion control and creating native plant greenbelts, and our actions limiting inputs of sediments and nutrients from streams. This is the work of the Watershed Council this year and every year.

So, what are we going to do about climate change? What we have always done. Protect our waters through science, education, restoration, and advocacy. Our goal is to maintain healthy water resources that will withstand impacts to them from every source and over the long term.

### **WATERSHED MANAGEMENT: What's Going On? (continued)**

The Lake Charlevoix Watershed Plan Advisory Committee has been very active for many years. We are forming new subcommittees to take on the updated plan, including efforts to address invasive species; restoration projects; outreach to local governments; events; and broad community education efforts.

#### **Little Traverse Bay**

Our USEPA/MDEQ approved Watershed Plan is five years old – at the midpoint of its expected life cycle. As a result, we spent 2011 taking stock with plan partners and reviewing how to get the best results in the final five years. We identified future projects and have been writing grant applications with partners in the plan. Additionally, the Little Traverse Bay Restoration and Protection Fund was formed at the Petoskey-Harbor Springs Area Community Foundation, with a generous lead gift from CMS.

#### **Cheboygan River**

There is no USEPA/MDEQ approved plan for the entire Cheboygan River Watershed, which is a huge land area. There is an approved plan on the Lower Black River, written in 2003 by the Northeast Michigan Council of Governments (NEMCOG). In the past, we also completed plans with NEMCOG for Burt, Mullett, Black, and Pickerel-Crooked Lakes. These plans need to be updated to be approved. Other subwatersheds are also now getting much needed attention, with brand new efforts underway. As those unfold, we will elaborate in future newsletters. Additionally, we recently submitted grant proposals to create new plans for a few subwatersheds – stay tuned!!



## Drug Take-Back Program Expanded

During the summer of 2011, Tip of the Mitt Watershed Council launched a permanent multi-county medication drug take-back initiative to provide a convenient, secure, and environmentally sound option for the disposal of unused and unwanted prescriptions, including controlled substances, and over-the-counter (OTC) medications. The initial success and excitement surrounding the program has led to a significant expansion. With the addition of nine more collection boxes installed at local law enforcement offices, the program now encompasses our entire four county service area of Antrim, Charlevoix, Cheboygan, and Emmet Counties.



Since 2000, over 550 overdose and drug poisoning deaths have been recorded in Northern and Central Michigan. The majority of these deaths are related to prescription drugs.<sup>1</sup> Through the Prescription and Over-the-Counter Drug Drop-off Program, we are reducing avoidable poisoning of both children and adults; preventing intentional misuse of unwanted prescription drugs, especially by teenagers; and protecting our water resources, fish, and other aquatic species in Northern Michigan.

POD Program partner Elisa Seltzer, Emmet County DPW Director, stated "Northern Michigan residents recognize the need to dispose of medicines correctly, and we've worked hard to make these POD boxes convenient so that there's no reason not to use them! Getting unused medicines out of the house limits the potential for abuse, and using the POD boxes ensures the best available disposal option, protecting our water and air."

The original POD Box program was made possible by grants provided by the Charlevoix County Community Foundation and Petoskey-Harbor Springs Area Community Foundation. Funding was also provided by the Charlevoix County Sheriff's Office who purchased their own drop-off box.

The recent expansion was made possible by generous funding from a variety of sources. The Emmet County Department of Public Works, a partner in the Emmet County POD Stakeholders Group, received a grant from the Michigan Department of Agriculture's Clean Sweep Program for 6 POD boxes. Other Emmet County POD stakeholders include Little Traverse Bay Bands of Odawa Indians, HARBOR Inc., Tip of the Mitt Watershed Council, Northern Michigan Regional Health System, Michigan State Police, City of Petoskey Department of Public Safety, Emmet County Sheriff, and Prescription Services Pharmacy.

Additional funding came from The Dole Family Foundation, Petoskey Rotary Club Charities, Inc., Burt Lake Preservation Association, and Mullett Lake Area Preservation Society.

Residents can drop off unused or unwanted medications at any time throughout the year. All medications are handled according to the law enforcement agency's evidence protocols until taken for final destruction in accordance with state and federal laws.

For a complete list of POD box locations and additional information about the project, please visit [www.watershedcouncil.org](http://www.watershedcouncil.org) or call 231-347-1181.

<sup>1</sup> Michigan Department of Community Health).

## POD Drop Box Locations

*Open 24 hours for your convenience.*

### ANTRIM COUNTY

- Antrim County Sheriff's Office - Administration Office
- Elk Rapids Police Department

### CHARLEVOIX COUNTY

- Boyne City - City Hall
- Charlevoix County Sheriff's Office - Jail Entrance
- Charlevoix County Sheriff's Office - Beaver Island Substation\*
- City of East Jordan Police Department

### CHEBOYGAN COUNTY

- Cheboygan County Sheriff Department
- Cheboygan Department of Public Safety
- Mackinaw City Police Department
- Tuscarora Township Police Department

### EMMET COUNTY

- City of Petoskey Department of Public Safety - Front Lobby of City Hall
- City of Petoskey Department of Public Safety, Public Safety Station West - Bay Harbor
- Emmet County Sheriff's Office - Jeffery P. Bodzick Administrative Office and Correctional Facility
- Emmet County Sheriff's Office - Richard L. Zink Law Enforcement Center
- Harbor Springs Police Department
- Little Traverse Bay Bands of Odawa Indians Tribal Police Department

\*Opens spring 2012.

### Items accepted for the Pharmaceutical Collection Program include:

- Prescription Drugs (Including controlled substances)
- Over-the-counter (OTC) Medicines
- Pet Medicines
- Nutritional Supplements and Vitamins
- Medicated Ointments and Lotions
- Liquid Medications in Sealed Containers or Plastic Bags

### Items NOT accepted in the program include:

- Needles, Lancets, or Pen Needles (ANY Sharps)
- Aerosol Cans
- Bloody or Infectious Waste
- Hydrogen Peroxide
- Thermometers
- IV Bags





## Tannery Creek Finds Five New Allies

A group of five master's students from the School of Natural Resources and Environment (SNRE) at the University of Michigan will soon be coming to Northern Michigan to help protect Tannery Creek. Located just east of Petoskey, Tannery Creek is affected by commercial and residential development in its lower section. Throughout the next year, the SNRE group will perform a watershed-wide assessment to determine the status of Tannery Creek and threats to the stream ecosystem, as well as work closely with local stakeholders to develop a comprehensive Tannery Creek Watershed Management Plan. The Watershed Council is very excited about this project and extremely thankful that the SNRE group has committed to help protect Tannery Creek.

## Protecting Our Waters is a Team Effort

The Watershed Council was created by a team of University of Michigan Biological Station staff and educators in concert with area lake association representatives. The goal of the organization's founders was to continue to support the needs of the region's lakes and streams that had been provided by the Biostation. The lake associations banded together to form the Watershed Council to carry out water quality research, outreach and education – services that they were receiving from researchers and graduate students at the Biostation over the years. This beginning as a coalition of lake associations remains today. Through our by-laws, at least one half of our board of directors must be comprised of representatives of member organizations, most of which are lake associations.

Our partnerships with lake associations take many forms and are essential to our success protecting our water resources. Lake association members provide volunteers, financial support, expertise, knowledge, and clout to our efforts. We value these partnerships. Our water quality monitoring and research program would be much less extensive without our lake association

partners. Our education and outreach is enhanced through lake association newsletters, presentations, and mailings to lake association members. We rely heavily on lake associations and their members to help us influence policy makers on behalf of our lakes and streams. We really couldn't do it without them!

This partnership goes both ways – the Watershed Council provides extensive support to our lake association members as well. We perform aquatic surveys and research for them, undertake extensive watershed management planning and implementation programming, prepare and distribute thousands of educational materials, and offer technical expertise to their associations. Our work on the statewide, Great Lakes Basin-wide and national level supports protection of our region's waters.

The Watershed Council is committed to continuing our effective partnerships with our region's lake associations. Our water resources are better protected with all of us working together. Please contact the Watershed Council for more information on partnering with us on these important programs.



## GLRI Grant: What to Expect this Summer

In the last edition of *Current Reflections*, we announced our exciting news about receiving \$887,723 through the U.S. Environmental Protection Agency's Great Lakes Restoration Initiative (GLRI). The grant will support the Watershed Council's Little Traverse Bay Stormwater Management Initiative (LTBSMI), a three year effort that includes four major project components. Project implementation has already begun and plans for summer construction of road-stream crossings, a stormwater wetland, rain gardens and stream restoration are underway. As you are out-and-about in the Watershed this summer, look for the following great projects as they become realities.

One of the LTBSMI road-stream crossing sites is on Click Road as it passes over the Bear River in Bear Creek Township. A 66 ft. clear-span timber bridge will replace the current structure, which consists of 3 large, metal culverts, and will be better aligned with the river channel. The Emmet County Road Commission will be constructing the bridge on-site and anticipates completing the project in late July. Funding from the Little Traverse Bay Band of Odawa Indians will support additional road work, including new paving, near the crossing.

In Charlevoix County, the second road-stream crossing project is where Holms Road passes over Hay Marsh Creek, a tributary to the Bear River. The existing, single culvert is undersized for the site and there is very little road surface above the culvert. Sediment from the road is easily washed into the stream. The new culvert will be sized to better match the hydraulics of the stream and to keep the road surface on the road, not in the stream! The Charlevoix County Road Commission is anticipating construction to take place this summer.

Construction of a stormwater wetland at North Central Community College (NCCM) will enhance the campus' capacity to collect, detain and treat runoff, as well as provide wetland habitat. The wetland will consist of two basins; a preliminary sediment forebay will collect sediment and a secondary basin will include native wetland plants, nesting areas, boardwalks, viewing platforms and signage. Construction of the stormwater wetland will take place in mid-to-late summer.

The Bay View Association Rain Garden Initiative will have its kick-off event in early summer. Bay View has long contended with its fair share of stormwater challenges. In an effort to mitigate some of the stormwater impacts, the Watershed Council and Bay View Association will promote the planting of rain gardens throughout the community. Twenty-five rain gardens will be installed at qualifying cottages over the course of three years.

Lastly, Lower Tannery Creek will be getting some attention. Preliminary restoration plans include: replacing the existing, undersized culvert that feeds the stream under the Little Traverse Wheelway with a clear-span bridge; removal of concrete debris from the stream channel; streambank stabilization; and invasive species treatment. Work is scheduled to begin this summer.

Summer is always a busy time for the Watershed Council, and this summer is looking to be no different thanks to the LTBSMI projects, but when it comes to the Bay...we wouldn't want it any other way!



### *Conserve Water = Save Cash!*

**Start saving on your water bill this summer!** A rain barrel collects and stores rainwater from your rooftop which can be used for a variety of non-potable uses including watering your indoor plants and outdoor landscape. Rainwater is naturally soft, more oxygenated, contains almost no dissolved minerals or salts, and is free of chemical treatment too.

To help you conserve water, **the Watershed Council now offers rain barrels for sale year round!** Barrels are delivered direct to your home or cottage. No need to rearrange your schedule for a pick up date. Ordering is easy and a portion of your purchase also supports the Watershed Council. Order your rain barrel today!

Visit [www.watershedcouncil.org/learn](http://www.watershedcouncil.org/learn) and click on "Rain Barrels"

In spring 1970, Wisconsin Senator Gaylord Nelson created Earth Day as a way to force pressing environmental issues of the time onto the national agenda. 20 million Americans demonstrated in different U.S. cities, and it worked! In December 1970, Congress authorized the creation of a new federal agency to tackle environmental issues, the United States Environmental Protection Agency (EPA). Earth Day is now observed in 175 countries.

For our part this year, Tip of the Mitt Watershed Council will be hosting an Earth Day movie on April 19th at the Petoskey Middle School. Look for details in the Upcoming Events of this newsletter.

In Cheboygan County, a group of hard-working folks created a very special local Earth Day celebration that lasts for more than a week – hence, the name: Earth Week Plus! Here is an excerpt from their website: “Earth Week Plus is an extended series of events around Earth Day, the global celebration of the

environment and commitment to its protection and stewardship. The history of Earth Day mirrors the growth of environmental awareness over the last four decades. The legacy of Earth Day is the certain knowledge that the environment is a universal concern.”

We urge you to visit their website at: <http://earthweekplus.com/> where you can see the great lineup of family-friendly events for the month of April. Enjoy!

Visit your Aquavist page at: <http://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, Policy Director at [grenetta@watershedcouncil.org](mailto:grenetta@watershedcouncil.org) or (231) 347-1181 ext. 115.

## CLIMATE CHANGE: Healthy ecosystems are key to weathering the warmth

The topic of climate change is a raging controversy for some, because of the debate over the possibility that humans are causing it. The main reason a cause is being sought, at all, is to determine if there is something we can do to stop or reverse it. However, as that debate goes on, the climate continues to change, right before our eyes. And, while it would be great to completely understand the cause, especially if policy decisions could affect a change, Tip of the Mitt Watershed Council is working to also understand how to best protect the waters of Northern Michigan and adapt to the changes underway.

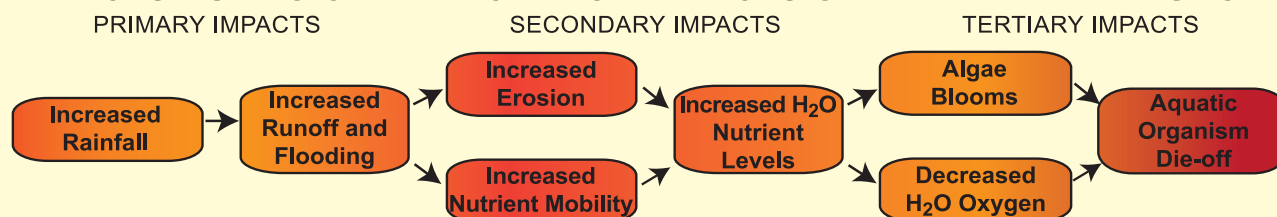
Biodiversity and healthy ecosystems mitigate effects of climate change. Aquatic ecosystems play a role in regulating climate change because, along with terrestrial ecosystems, they absorb enormous amounts of carbon emissions. So, working with nature – rather than against it – brings benefits for adaptation. Conservation of natural resources and restoration of degraded ecosystems are becoming major, cost-efficient allies in our fight against climate change.

Unfortunately, climate changes affecting natural systems are happening alongside impacts that contribute to the loss of biodiversity and degradation of ecosystems. Real world examples of this include destroying valuable wetlands along our Great Lakes coastlines, or the shorelines of inland lakes and streams. When climate change is added to the mix, it makes the losses even worse.

So, it is an interesting sequence of events: humans impact biodiversity. Climate change also damages biodiversity. If these systems are restored, they mitigate climate impacts. If they are not restored, their degradation helps to accelerate climate change because we lose their important ability to absorb carbon emissions. Regardless of the cause of climate change, restoration and protection of healthy aquatic ecosystems should remain a very high priority.

SOURCE: European Commission, 2009

### IMPACTS DUE TO CLIMATE CHANGE EFFECTS ON RAINFALL AND RUNOFF





## Tributaries Affect Even the Biggest Lakes

A fundamental approach to water resource management is figuring out where the water comes from, where it's going to, and what happens along the way. Taking this approach, the Watershed Council has worked with lake associations from two of the region's biggest lakes to assess watershed impacts by monitoring tributaries flowing into the lakes. Between 2005 and 2007, the Mullett Lake Area Preservation Society (MAPS) sponsored a detailed study of the three largest streams that flow into Mullett Lake. In 2011, the neighboring Burt Lake Preservation Association (BLPA) followed the footsteps of MAPS and sponsored a similar study to find out how five inlet tributaries affect Burt Lake. In general, data from these studies show the obvious: bigger streams have bigger impacts. However, there have also been some eye-opening revelations that have compelled the lake associations to more closely scrutinize their respective watersheds.

After three years of monitoring the Mullett Lake tributaries, data showed that the Indian River contributed the greatest amount of flow and nutrients, followed by the Pigeon River, and then, Mullett Creek. Unexpectedly however, there was virtually no sign of pollution in the Indian River despite flowing through the urban community of the same name. This was attributed to pollution dilution; the urban pollution signal was lost in the large volume of clean water from Burt Lake that makes up the Indian River. What turned out to be the most revealing part of this study was the impact of Mullett Creek; data showed that the Creek contributed excessive amounts of

nutrients, such as phosphorus, to Mullett Lake. Upon examining the Mullett Creek Watershed more closely, agricultural activity was found to be the likely source of nutrient pollution. Since the study's completion, the Michigan Department of Natural Resources, United States Fish and Wildlife Service, and United States Department of Agriculture have all been taking a closer look and are trying to address problems in the watershed. In addition, a 2011 student group from the University of Michigan Biological Station developed a Mullett Creek Watershed Management Plan that provides a framework for systematically addressing nonpoint pollution sources and other stressors in the watershed, which will ultimately lead to improved water quality in both the Creek and Mullett Lake.

The Burt Lake tributary study is currently underway with a year's worth of data collected. Based on results from the first round of monitoring, nearly 50% of water discharged (i.e., flow) into Burt Lake comes from the Sturgeon River and just under 30% comes from the Crooked River. For reasons yet to be determined, the Maple River contributes more phosphorus to Burt Lake than would be expected. Interestingly, and unexpectedly, the Sturgeon River contributes the lion's share of chloride and suspended solids (i.e., sediments or dirt) to Burt Lake. After BLPA has had a chance to read the project report and review the data, they will decide whether to fund the study for an additional year. In the meantime, the Watershed Council and BLPA will start taking a closer look at the Sturgeon to identify pollution sources and possible solutions.





# Great Lakes Bulrushes

Guest Article by Dennis Albert

Among the most common and important plants in the large coastal wetlands of the northern Great Lakes are three-square bulrush (*Schoenoplectus pungens*) and hard-stem bulrush (*Schoenoplectus acutus*) – plants that are able to tolerate the high wave energy of the open shore. Unfortunately bulrushes have become much less common in the southern Great Lakes in recent years. Bulrushes are important because of their ability to grow in relatively deep water (four to five feet deep or deeper), their flexible stems that allow them to bend rather than break when hit by storm waves, and their dense root systems that resists soil erosion by both waves and currents. Growth in deep water is facilitated by large, hollow cells that conduct air needed for plant respiration down to the roots of flooded plants.

A 2010 study in Oregon State University's (OSU) wave tank demonstrated that a ten meter (32 feet) bed of three-square bulrush could reduce the height of a 40 centimeter (16 inch) wave by 60%. Bulrush beds along Saginaw Bay and in the Les Cheneaux Islands of Lake Huron are often 200 to 300 meters (650 to 970 feet) in depth from the shore, and able to almost completely dissipate waves before they reach the shore. As part of the OSU wave energy study, several hundred pounds of sand were placed near the front of the bulrush beds, and it was found that sands moved both further and more rapidly in the beds that had no bulrushes. Just as important, a bed of sand without plants was rapidly eroded, while the sands of the bulrush beds were highly resistant to erosion, even after being subjected to



several hours of waves. This resistance to erosion results from bulrushes having ten to twenty times more root than stem.

Even though bulrushes are able to withstand permanently flooded conditions, new bulrush plants can only establish on moist or very shallowly flooded shorelines. However, once seedling bulrushes establish, they are able to grow by rhizome (horizontal stems) out into deeper water. Bulrushes are long lived – commonly over forty years old, with rhizomes more than 4 meters long. Plants in Saginaw Bay may have begun growing thousands of years ago, and though portions of the plant may die, new stems continue to sprout.

But bulrushes are vulnerable to a combination of invasive plants and climate change. Predictions are that the Great Lakes may be reduced in size with climate change, and as water levels drop, invasive species like hybrid cattail (*Typha X glauca*) or reed (*Phragmites australis*) establish near the shoreline and rapidly outcompete bulrushes. Neither of these invasives provide the conditions important for juvenile or spawning fish, shorebirds, or other species adapted to open habitat. Bulrushes are also vulnerable to the shoreline plowing and diking practiced by some landowners on Saginaw or Grand Traverse Bays. One or two years of plowing sever the rhizomes into small pieces that are vulnerable to drying and eventual death. So, although the population of bulrushes are stable here in Northern Michigan, the threats to their population are moving north.

Bulrushes are being raised by native plant greenhouses for restoration projects in both fresh and brackish waters. Several of their characteristics – including long life, vegetative reproduction, and tolerance of flooding and high wave energy make them ideal plants for wetland restoration.





## Eurasian Watermilfoil Spread Throughout the Elk River Chain of Lakes

Eurasian watermilfoil is rapidly becoming a household name, or at least for those living along lake shorelines in our area. Ten years ago, this invasive aquatic plant was only known to exist in the Great Lakes and in a couple of the region's inland lakes, such as Paradise and Charlevoix. Since that time it has spread to most of our big lakes, including Burt, Mullett, and Walloon. Most recently, it has crept into and through the Elk River Chain of Lakes, from Sixmile Lake down to Torch.

The Latin name for Eurasian watermilfoil, *Myriophyllum spicatum*, is very appropriate. *Myriophyllum* comes from the Greek *myrios* for "countless, infinite", and *phyllon* for "leaf; foliage." Those who have had the misfortune of battling against Eurasian watermilfoil can attest to its seemingly countless and nearly endless foliage. *Spicatum* comes from the Latin *spica* for "ear of wheat" and means "spiked". Once established in a lake, this invasive watermilfoil rapidly spreads, outcompetes existing native plants, resulting in serious ecosystem-wide problems. As it grows thicker, reaching the surface and expanding throughout a lake, native plant communities suffer and recreational activities, such as boating, skiing, and fishing, are impeded.

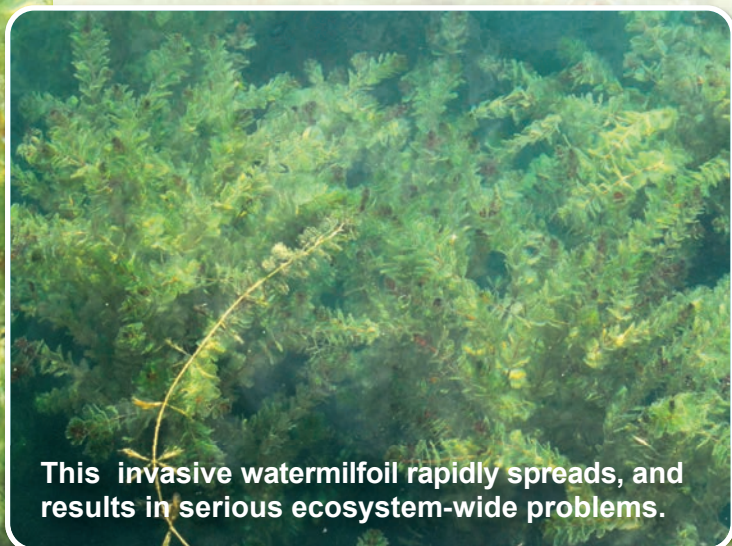
In 2008, while conducting a shoreline survey on Sixmile Lake, Watershed Council staff came upon a previously undocumented infestation of Eurasian



**As Eurasian watermilfoil grows thicker, reaching the surface and expanding throughout the lake, recreational activities, such as boating, water skiing, and fishing are impeded.**

watermilfoil. It was found near the Lake's Michigan Department of Natural Resources boat launch, which was not surprising as this invasive species is commonly spread from lake to lake by hitching a ride on boats and trailers. The Six Mile Lake Association was immediately notified of the problem and soon after, took action to address the problem. During the course of the last few years, the Association has stocked thousands of aquatic weevils; minute native beetles that feast on Eurasian watermilfoil in their larval stage and eat the plant from the inside out. This biological control effort is ongoing and we are hopeful it will yield positive results, and that herbicide application can be avoided and potentially costly chemicals, both financially and environmentally, kept out of the lake.

On the other end of the Chain of Lakes, the Three Lakes Association (TLA) has taken a different approach to controlling Eurasian watermilfoil infestations found in Torch Lake. After assessing the situation and control options, TLA decided to pursue suction harvesting (aka, diver dredging) to "root out" the invasive watermilfoil problem. During the summer of 2011, divers with industrial-sized aquatic vacuum cleaners loosened the root masses in a couple Eurasian watermilfoil patches and used suction to remove, and later dispose of, the invasive plant material. We will follow this approach to assess its success for use in other areas.



**This invasive watermilfoil rapidly spreads, and results in serious ecosystem-wide problems.**



In early March, nearly 20 people from the area braved the cold to attend a presentation at the Freshwater Center to learn and talk about the large variety of paddling opportunities in Northern Michigan. Following two years of presentations focusing on rivers, Kevin Cronk, Monitoring and Research Coordinator, shifted gears this year to talk about paddling opportunities on small gem lakes throughout the “tip of the mitt.” This was one of six “Icebreaker” presentations given throughout the winter by Watershed Council staff, as well as guest lecturers from other organizations.

With a room full of paddling enthusiasts, Kevin related experiences and provided water quality and other information about some of his favorite lakes in the area. From his initial list of 20 of the region’s nicest paddling lakes, he had only enough time to talk in depth about five: French Farm Lake, Thumb Lake, Twin Lakes, Wilson Lake, and Wycamp Lake. Although largely subjective, the criteria used in determining which were the most pleasant lakes to paddle included, calm and quiet, undeveloped/natural shoreline, and diversity of wildlife.

With so much enthusiasm and passion for paddling in the room, the conversation among attendees went on at length; two hours later, the one-hour presentation came to an end. However, that was just the beginning for at least some of the attendees, who were intent upon getting out this summer and exploring some of the hidden gems that are among the most pleasant paddles of Northern Michigan.

Be sure that you don’t miss out on next winter’s Icebreaker series, which often fill up quickly, so sign up early. For more information, visit our web site at [www.watershedcouncil.org](http://www.watershedcouncil.org).

## Pleasant Places to Paddle

Statistics for lakes discussed in the Pleasant Paddles presentation.

Lake Name	Lake Size (acres)	Perimeter (miles)	Max. Depth (feet)
French Farm	590	6.0	10
Thumb	508	7.6	150
Twin	181	7.0	73
Wilson	89	3.4	47
Wycamp	610	8.6	7

## Volunteer Stream Monitoring Winter Event

Volunteer Stream Monitors, member and friends made the journey to the Five Mile Creek nature preserve for this year’s winter monitoring. After exploring the creek the group will returned to the Tip of the Mitt Watershed Council office for a potluck and socializing. An enjoyable time was had by all... and the food was fabulous!





## Fish and Fisheries in Great Lakes Bays

*Guest Article by Dave Clapp,  
Watershed Council Board Member*

When people think about Great Lakes fish, the first thing that comes to mind is often salmon; these large, hard-charging fish are pursued in offshore waters by hundreds of thousands of anglers each year. But while these “glamour” fish get lots of press, the real action isn’t in the offshore waters. The most important areas of the Great Lakes are arguably the bays and nearshore waters; where fish diversity is the greatest, the vast majority of fish production occurs, and which are currently at greatest risk from aquatic invasive species and habitat destruction.

In the nearshore waters of northern Michigan, netting surveys have given us an amazing picture of diverse fish populations that most people probably don’t know exist. In a typical survey, biologists may see as many as 15-20 different species of fish: including various minnow and shiner species; non-native species such as alewife, rainbow smelt, and round goby; darters; longnose dace; mottled sculpin; stickleback; suckers; and more familiar “game” species such as smallmouth bass, rock bass, and yellow perch.

Fish congregate in these nearshore areas because they provide everything a fish needs to survive; productive food resources, complex habitats in which to evade predators, and prime spawning habitat. In fact, some northern Michigan habitats a Petoskey-stone throw from shore have sustained remnant populations of once-abundant fish; for example, reefs near Elk Rapids are used by one of the few remaining cisco (lake herring) populations in the Great Lakes.

Nearshore areas are extremely important to Great Lakes fish, but they are also at great risk from the numerous threats confronting the lakes. While the Bays encompass some of the best

lake trout spawning reefs in the Great Lakes, lake trout are still unable to successfully reproduce here due to the extreme abundance of exotic egg predators (including rusty crayfish). Habitats are being altered, perhaps irreversibly, by the presence of invasive mussels. Various species of darters and sculpins were once abundant in these waters but are now rare, most likely due to competition from round goby. Great Lakes bays are also the areas most vulnerable to Asian carp invasion.

Calm nearshore waters can provide a beautiful backdrop to an autumn beach walk or make for a memorable summer kayak trip. However, we should keep in mind that everything isn’t calm beneath the surface. These waters are home to an ever-changing community of aquatic organisms, faced with an increasing number of threats.

### **Additional reading:**

Michigan DEQ (Coastal Zone Management Program):  
[www.mi.gov/coastalmanagement](http://www.mi.gov/coastalmanagement)

U.S. EPA. 2009. Nearshore areas of the Great Lakes:  
[http://binational.net/solec/sogl2009/SOGL\\_2009\\_nearshore\\_en.pdf](http://binational.net/solec/sogl2009/SOGL_2009_nearshore_en.pdf)

Vadeboncoeur, Y., P.B. McIntyre, and M.J. Vander Zanden. 2011. Borders of biodiversity: life at the edge of the world's large lakes. *BioScience* 61:526-537.



### **Michigan's Free Fishing Weekend June 9 & 10, 2012**

All fishing license fees will be waived for two days. Enjoy fishing on both inland and Great Lakes' waters.\* Fishing provides a great opportunity for you to talk to your children about watershed stewardship.

\*All fishing regulations will still apply.

## More Than Just a

# Pretty Plant

Native plants are plants species that are, well, native to a given region. Here in Northern Michigan, native plants have acclimated to our cold winter, short summers, sandy soils, and local bugs and browsers (e.g. rabbits, deer, etc.). They are more than just part of the scenery; they are a critical piece of the greater ecosystem puzzle. Using native plants in landscape projects, including rain gardens and shoreline restorations, is a great way to help the piece stay in place. For residential landscapes, they not only add beauty, but can also provide habitat and save you time and money as they typically require less maintenance. Many native plants have a deep network of roots, which is ideal for shoreline restoration projects and rain gardens because long, fibrous roots hold soils in place, as well as draw surface runoff down below ground.

So if you are convinced to try native plants in your next landscape project, there are a few things you should know. Digging them up from the wild is not OK for several reasons including:

- Most native plants when dug from their natural habitat do not survive being transplanted
- Their removal can adversely affect local pollinators and other animals that depend on them, as well as the species' long-term survival in that location
- For protected species, it is just plain illegal.

A better alternative for obtaining native plants is to purchase them through a reputable nursery that either uses Michigan native plant seed sources to propagate their own stock or obtains plants grown from a grower committed to using native seed. To locate a native plant nursery, contact the Michigan Native Plant Producer Association ([www.MNPPA.org](http://www.MNPPA.org)), a state-wide group of native plant growers. Northern Michigan native plant species may also be available from local nurseries, but they may be grown from seed outside the region. These plants will still be suitable, but a plant with more local genetics will have an advantage in our Northern Michigan climate.

In future issues of Current Reflections, we will highlight some of our favorite native plants and provide useful information for you to consider when you “go native!”

**For a printable list of suggested native plants visit our website at [www.watershedcouncil.org/learn](http://www.watershedcouncil.org/learn) and click on the “Landscaping with Native Plants” tab.**



### Red-osier Dogwood

(*Cornus sericea*)

What would our lakes and streams be without the beautiful red stems of this native shrub? Most at home along shorelines and streambanks, but also content in yards and gardens, this versatile dogwood can tolerate a range of light and moisture conditions. Shrubs can reach 6 ft. or more at maturity, but can be pruned rather aggressively to keep the height lower and the stems more red!

### Joe-Pye Weed

(*Eupatorium maculatum*)

A common but far from ordinary wetland plant, Joe-Pye weed can reach heights in excess of 5 ft. It prefers moist soils in full-to-partial sun. A favorite of many species of butterflies and other pollinators, Joe-Pye weed gets lots of “buzz” in mid-to-late summer.



### Harebell

(*Campanula rotundifolia*)

Delicate looking, but tough as nails, harebell is happy in dry, sandy soils with plenty of sunshine. Adorned with pretty blue flowers that bloom from June to September, harebell is perfect for rock gardens and small-scale landscapes as it grows to only a little more than 12 inches tall.

### Ostrich Fern

(*Matteuccia struthiopteris*)

Ostrich fern, our most robust fern, prefers a cool, moist, and shady setting. With its upright, vase-shape form and impressive height of 2-5 ft., it is a good candidate to serve as a backdrop for smaller woodland perennials. Ostrich fern looks best when planted in masses, but with its ability to spread by rhizomes, it won't take long before it fulfills its garden role.



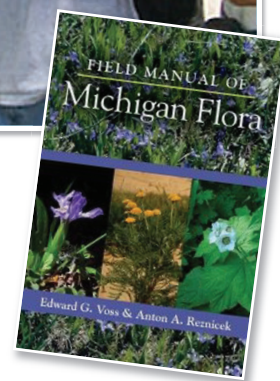


## Tribute to Dr. Edward Voss

Long-time member and supporter of the Watershed Council, Dr. Edward G. Voss, passed away this February at his home in Ann Arbor. He was a legendary teacher at the University of Michigan Biological Station and the University of Michigan and taught numerous Watershed Council employees the identification and science of vascular plants over the years. His unmatched knowledge and contagious enthusiasm for Northern Michigan's ecology helped create the strong scientific background for many of our staff and thousands of his other students. No matter your age, you had to run to keep up with him in the woods and came away from a field trip or class with Dr. Voss in awe of his abilities and much better equipped with information on the world around you. His three-volume, *Michigan Flora: A Guide to the Identification and Occurrence of the Native and Naturalized Seed-plants of the State*, is cherished and fought over here in our offices, and will serve to educate thousands of budding botanists and ecologists for generations to come. Thank you, Ed, for your contributions to the environment of Michigan. You will be missed.



**Dr. Edward Voss was a legendary teacher at the University of Michigan Biological Station and the University of Michigan. His books on Michigan flora will continue to educate budding botanists and ecologist for generations to come.**



## Watershed Council Welcomes Dan Myers

Before being hired as the Watershed Council's new part-time Water Resource Specialist, Dan Myers was an intern at Tip of the Mitt Watershed Council for two summers while pursuing his B.S. in Fisheries and Wildlife from Michigan State University. Dan's past experiences include volunteering at the Jordan River National Fish Hatchery, being a volunteer

turtle cleaner after the Kalamazoo River oil spill, and being a Stream Monitoring Coordinator at the Mid-Michigan Environmental Action Council in East Lansing. He was also a backcountry field intern for the Isle Royale Wolf/Moose Study and was a member of the MSU Fisheries and Wildlife Club.



"We are really excited to have Dan join our team. His passion for our Northern Michigan waters plus his experience in the field will be a great asset to our organization and its mission to protect our vital water resources," said Gail Gruenwald, Executive Director.

Dan is currently providing assistance to all areas of the organization including organizing this year's Bear River Cleanup and Experience Lake Charlevoix. He is also assisting with monitoring projects for the water protection team, research work for the policy team, and coordinating the work of our interns. Needless to say, we've been able to keep Dan plenty busy since he arrived in January.

Contact: Dan Myers  
[dan@watershedcouncil.org](mailto:dan@watershedcouncil.org)



## Welcome New Members

9/29/11 - 3/14/12

Mr. Allan Allerdig  
Mr. and Mrs. Kurt Anderson  
Ms. Laurie Angell  
Mr. and Mrs. Allen Babcock  
Mr. and Mrs. Arthur S. Bak  
Bay Harbor Yacht Club  
Barbara Jo & Alan R. Berlin  
Mr. and Mrs. Andrew P Bowman  
Dermatology Associates  
of Northern Michigan  
Caryl G. Emerson  
Mr. and Mrs. John H. Faett, III  
Gary Fedus  
Mary and Jerry Foote  
Mr. and Mrs. Andrew C. Gamalski  
Mr. and Mrs. Otto K. Georgi, Jr.  
Ms. Betty Germain  
Mr. and Mrs. Stephen Glazek  
Rev. Robert Gordon  
Mr. and Mrs. William E. Greenwalt  
Gurney's  
Robert and Janet Halderman  
Mr. Larry A. Hanson  
Mr. and Mrs. Gordon Harvey

Jansing-Cook Foundation  
Mr. and Mrs. James M. Johnston  
Ms. Paula A. Jonas  
Mr. and Mrs. Frederick Klippert  
Matt Cauchy and Ellen Kohler  
Mr. Allan Kotwicki  
Mr. and Mrs. Charles S. Lee, II  
Mr. and Mrs. Timothy J. Leroy  
Wm. and Linda Little  
Evelyn Lott  
Mr. and Mrs. William J. McElroy  
Mr. and Mrs. William F McKinley  
Mr. Daniel T. Myers  
Mr. & Mrs. William Nelson  
Mr. Clas Nilstoft  
Mr. and Mrs. Jack Norris  
Gretchen Olsen  
Ruth S. Petit  
Mr. Alan R. Pfaff  
Mr. and Mrs. Timothy B. Pirrung  
Mr. and Mrs. Earl J. Raible  
Susan McCraven and Robert Reider  
Ms. Lynne G. Rosenthal  
Mr. and Mrs. Charles Rowland

Mr. and Mrs. Robert E. Rowlands  
Ms. Nancy Salden  
Pat Shagdai  
Mr. and Mrs. William Shelton  
Mr. and Mrs. Fritz Simons  
Mr. and Mrs. Gregory R. Skau  
Mr. William L. Smith  
Mr. and Mrs. Daniel Socha  
Mr. and Mrs. Theodore  
W. Szydowski  
TMF Limited Partnership  
Mr. and Mrs. Peter C. Trantow  
Sally Wagle  
Mr. Doug Welker  
Bob Williams  
Young and Meathe Custom  
Homes LLC  
Marty Smillie and Kurt Yuengling

## Memorials & Honorariums

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 Memory of:

Thomas H. Carruthers IV  
Heidi Hill  
Jansing-Cook Foundation  
Barbara Conn  
Mr. and Mrs. David C. Monroe  
Bonnie Geppert  
Caryl G. Emerson  
Fran Kohler  
Mr. Michael T. Kelbel  
Michael T. Kelbel-Conservator  
Frances Kohler  
Patricia Church  
Alan Belstock  
Tom McDonald  
Mr. and Mrs. David C. Monroe  
Betty Ostler  
Ward and Eis Gallery  
Peg Rashid  
Marilyn Rashid  
William Spengler  
Sheri and Emmett Windisch  
Bob Stebbins  
Mr. and Mrs. Bowden Brown

### In Honor of:

Linda Badalucco  
Linda Heller  
Bill and Pat Bray  
Linda Heller  
Meg Cowan  
Kate and Rob Upton  
Arthur Curtis  
Owen Curtis  
Mr. & Mrs. A.W. Hallett  
Mr. and Mrs. Charles Forsberg  
Mr. & Mrs. Ronald Kauper  
Mr. and Mrs. Charles Forsberg  
Joellen & Rod Rodgers  
Maureen Owens  
Marilynn Smith  
Bay Harbor Yacht Club  
Dana Vannoy  
Mr. and Mrs. Robert D. Stillman



### Join our facebook "Group"

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

<http://www.facebook.com/#!/groups/watershedcouncil/>



## Thank You

**Merlin Dumbrille of WTCM** for conducting regularly scheduled interviews with Tip of the Mitt staff to keep Northern Michigan abreast of important issues.

**Roast & Toast of Petoskey** for providing delicious fresh coffee for our meetings and events.

**Petoskey DPW** for assisting with bacteria analysis of stormwater.

**North by Nature Landscaping** for maintaining the landscaping at the Freshwater Center. It will look beautiful this spring thanks to their plucking, pruning, and TLC.

**Phyllis Higman** for speaking about the Michigan Natural Features Inventory at our winter Ice Breaker speaker series.

## Volunteers & Interns

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

### RSVP Volunteers

Sharon Brown      Shelly Lemieur      Jude Parson  
Joanne Deckinga      Lurli Vaughan

### Other Volunteers

**Sharon's friend Cindy**  
Mailings

**Sharon's daughter ??**  
Mailings

Claire Rassmussen  
Gaps Analysis Research, Policy Team

Lindsey Walker  
Mailings, collected bottles for holiday display

### Interns

Nick Graybriel, NCMC - GIS intern

Caleb Slater, Petoskey NHS - GPS Photos Renaming,  
Walloon Greenbelt Survey and IT assistance

Cameron Schock, Petoskey NHS - GPS Photos  
Renaming and Walloon Greenbelt Survey

Austin Kruzal, NCMC Biology Class - helped rebuild  
Eckman Grab sampler and organize library.

**George Radar, Seamus Class?**

## SAVE THESE DATES...

*A complete list of upcoming events will be mailed in May.  
Additional details available at [www.watershedcouncil.org/events](http://www.watershedcouncil.org/events)*

April 19	Earth Day Movie
April 27-28	Michigan Lakes & Stream Association Conference at Boyne Mountain
May 5	Emmet County Prescription and Over-the-Counter Collection Day
May 12	Volunteer Stream Monitoring Training Day
May 19	Volunteer Stream Monitoring Field Day
May 25	Volunteer Lake Monitoring Training
June 3	Volunteer Stream Monitoring Indoor Identification Day
June 13	<b>Purple Loosestrife Beetle Collection</b>
June 18	Lake Association Summit
June 30	Bear River Paddling Poker Run
June 30	Emmet County Prescription and Over-the-Counter Collection Day
DATE?	33rd Annual Meeting at NCMC Program: Climate Change
July 21	Whale of a Sale
August 4	Healing the Bear - River Cleanup
August 6	<b>Lake Michigan Summit Harbor Springs, City Hall</b>
August 13	<b>Lake Michigan Summit Charlevoix, Public Library</b>

## SUMMER "WOW" TOURS (WEDNESDAYS ON THE WATER)

*Tentative dates. A complete list of events will be mailed in May.  
Additional details available at [www.watershedcouncil.org/events](http://www.watershedcouncil.org/events)*

June 13	<b>Grass Bay Preserve - Walking Tour</b> w/Jennifer Gleb
June 27	<b>French Farm Lake Paddle</b> w/Kevin Cronk ~ 5-7pm
July 25	<b>Keewenaw Star Sunset Cruise on Lake Charlevoix</b> Advanced tickets required. ~ 7-9pm
August 8	<b>Sturgeon River Paddle</b> w/Kevin Cronk ~ Experienced paddlers only.
August 22	<b>Sixmile Lake Paddle</b> w/Dan Myers



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

# A Whale of a Sale

**ONE DAY ONLY**

**Saturday, July 21, 2012**

**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

**Summer Events  
Calendar Inside!**

(See page 15)

Nonprofit  
Organization  
U.S. Postage

**PAID**

Petoskey, MI  
Permit No. 108



Visit [www.watershedcouncil.org/events](http://www.watershedcouncil.org/events)  
for registration form and event details.

## **SPONSORSHIPS AVAILABLE**

Contact Kristy Beyer, 231-347-1181 or  
[kristy@watershedcouncil.org](mailto:kristy@watershedcouncil.org)

Join us for a leisurely paddle down the Bear River in Petoskey on **Saturday, June 30, 2012** and you could also win CASH during the Bear River Paddling Poker Run. Entry into the event costs \$25. Each person who registers before June 15 will receive a commemorative T-shirt. The poker paddle starts at the River Road stream crossing near Conway. As the paddlers follow a designated route, they will then stop at certain points to pick up a card. At the end, there will be cash prizes for the top poker hands. Prizes will be determined by the number of participants, so invite your friends!

### **TO REGISTER**

Call (231) 347-1181  
or visit our website for  
a downloadable form  
[www.watershedcouncil.org](http://www.watershedcouncil.org)

*Registration opens May 1, 2012*

