



A "detailed" view of our watershed work.



2013 Annual Report

*A "detailed" view of our
watershed work.*

Shoreline Surveys

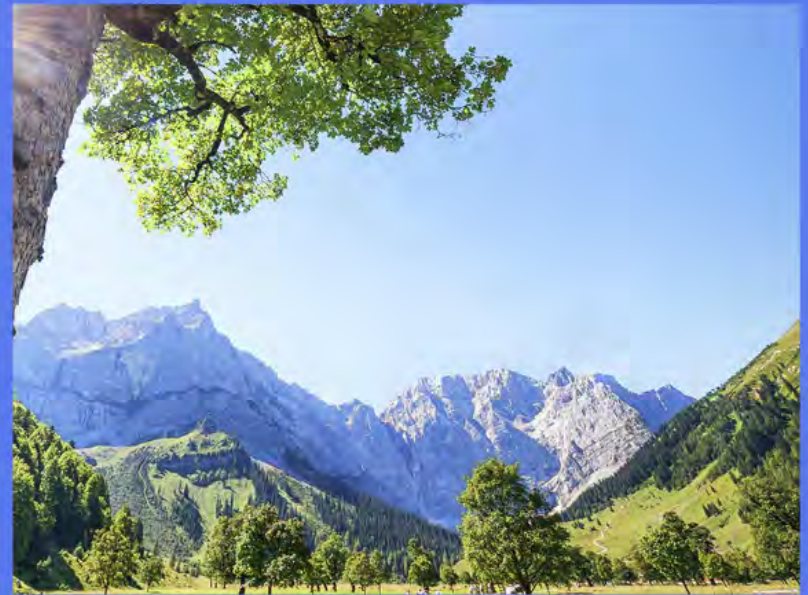
The Lake Huron shoreline on **Duncan and Grass Bays** were surveyed to gather information that will be used to develop a nonpoint source pollution watershed management plan, a project funded by the Michigan Department of Environmental Quality (MDEQ).

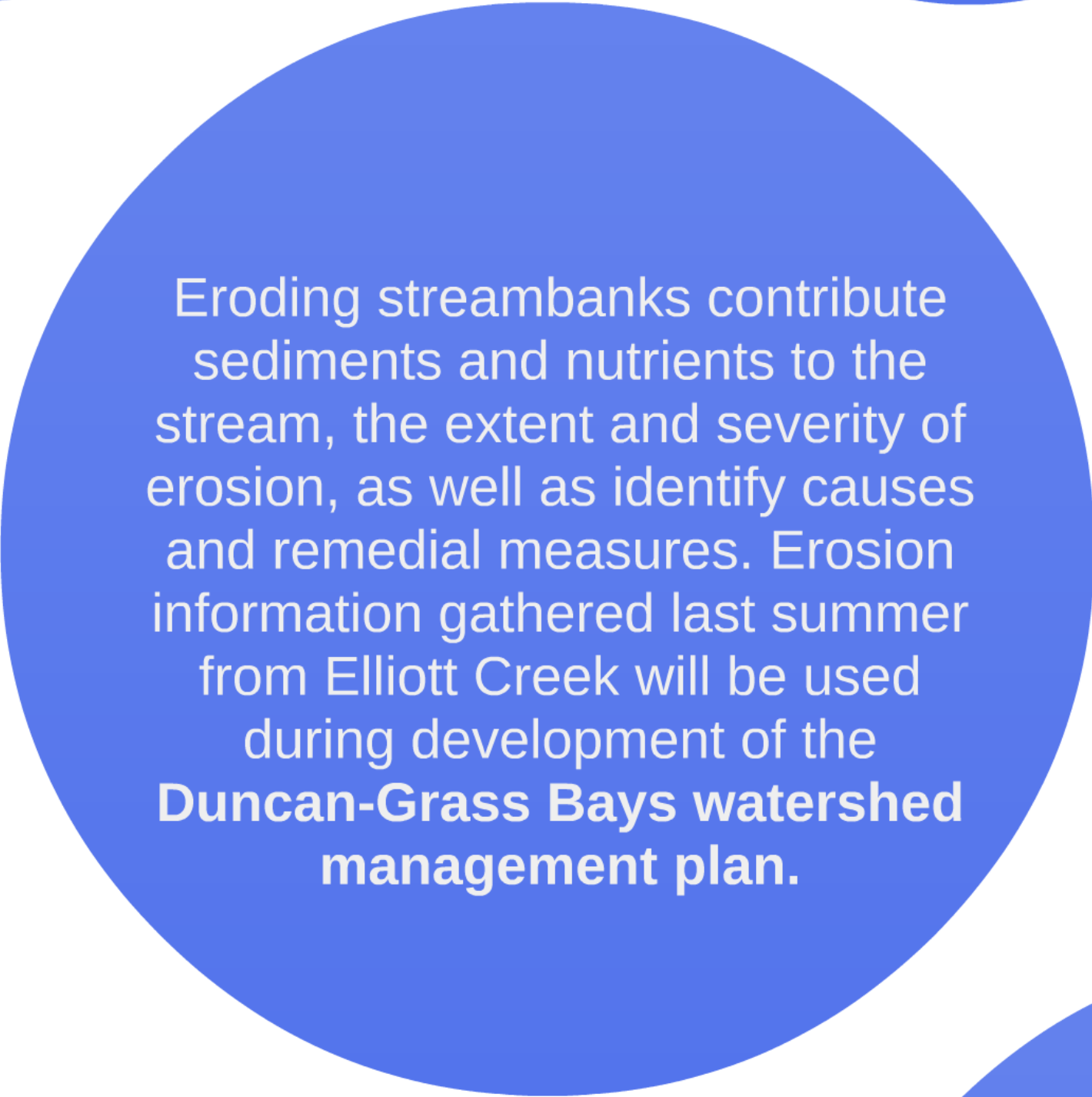
In addition, the Watershed Council and Pickerel Crooked Lakes Association continued efforts to address problems identified in our 2012 shoreline survey on **Pickerel and Crooked Lakes**.

Road-Stream Crossing Inventories

Places where roads cross streams are a source of nonpoint source pollution and can be a barrier to fish passage. Pollutants from road-stream crossings (RSXs) that are carried to the stream in runoff include sediments, de-icer, leaking automotive fluids, and heavy metals. RSX inventories were completed for the **Duncan Bay, Grass Bay, Stover Creek, and Little Traverse Bay Watersheds** during 2013. Inventory data will be utilized to address problematic sites and develop watershed management plans.

2013 Streambank Surveys

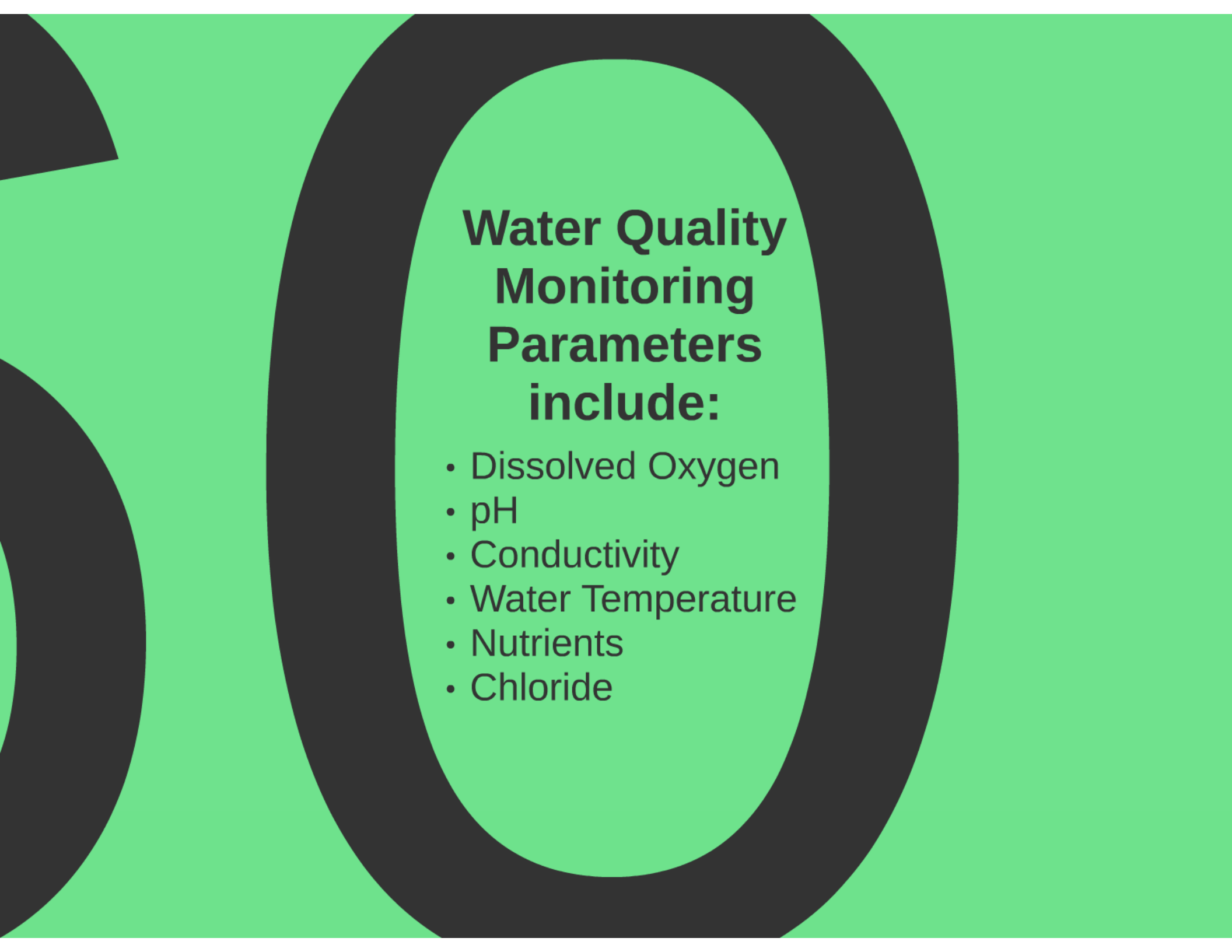


A large blue circle is centered on the page, containing white text. The background is white with several other blue circular shapes of varying sizes partially visible at the top, bottom, and right edges.

Eroding streambanks contribute sediments and nutrients to the stream, the extent and severity of erosion, as well as identify causes and remedial measures. Erosion information gathered last summer from Elliott Creek will be used during development of the **Duncan-Grass Bays watershed management plan.**

Water Quality Monitoring

In 2013, 60 lakes and streams were monitored as part of the Comprehensive Water Quality Monitoring Program.



Water Quality Monitoring Parameters include:

- Dissolved Oxygen
- pH
- Conductivity
- Water Temperature
- Nutrients
- Chloride

Monitoring on Elk Lake, Lake Skegemog, Duncan Bay, and Grass Bay was funded by:

- Elk-Skegemog Lake Association,
- Michigan Department of Environmental Quality,
- and Watershed Council members like you.

Stormwater Monitoring

In 2013, Michigan Department of Environmental Quality funding allowed us to work with the **City of Cheboygan** to evaluate stormwater impacts to **Duncan Bay**.

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Funding from the Charlevoix County Community Foundation allowed us to start the process of addressing stormwater problems in the **Village of Boyne Falls** to protect the **Boyne River**.

Little Traverse Bay Stormwater Management Initiative

The final phase of construction at
North Central Michigan College's
stormwater wetland was completed.



*Click on the YouTube video
to see the new stormwater
wetland in action.*

Before



**NCMC
Stormwater
Wetland**

After





Three rain gardens were installed as part of the **Bay View Rain Garden Initiative**





A new, larger culvert was installed to allow better passage of **Hay Marsh Creek under Holms Road** in Charlevoix County.



Aquatic Invasive Species Management

During 2013, we continued our battle against the invasive *Phragmites*, working with shoreline property owners to control infestations along with **+70 miles of Lake Michigan shoreline** in Emmet County.



Aquatic Vegetation Surveys

Plant surveys were conducted on **Long Lake (Cheboygan County), Walloon Lake, Lake Bellaire, and Clam Lake**. The surveys on Long and Walloon were sponsored by the respective lake associations, while the Dole Family Foundation funded surveys on Clam and Bellaire.

Workshops

Two greenbelt workshops were held as part of the Watershed Council's Midwest Glacial Lakes Partnership grant.



The Watershed Council partnered with the **Mullett Lake Preservation Society (MAPS)** to implement a hands-on, homeowner workshop that included instruction and installation of a greenbelt on **Mullett Lake**.





We also partnered with the **Three Lakes Association** to conduct a similar workshop and installation of a greenbelt on **Lake Bellaire**.



Priority Parcel Analysis

In order to protect sensitive areas in the **Torch Lake Watershed**, the Torch Lake Preservation Alliance (TPLA) worked with the Watershed Council to evaluate individual parcels based on multiple ecological criteria.

Priority Parcel Analysis Criteria include:

- Parcel Size
- Wetlands
- Lake Shoreline
- Streams
- Groundwater Recharge Potential
- Threatened / Endangered Species
- Wildlife Corridor Value

Priority parcel analysis results provide a tool for land conservancies, governmental entities, and others to assist in **prioritizing land protection efforts** in a manner that provides the greatest benefit to local ecosystems, while also complementing existing land protection efforts.



Avian Botulism Monitoring

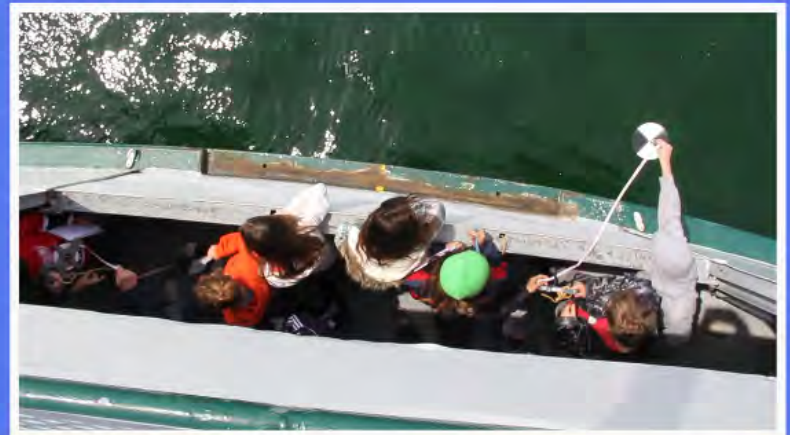
29 volunteer "Beach Rangers" monitored the **Lake Michigan shoreline of Charlevoix and Emmet Counties** for avian botulism fatalities. The data Beach Rangers collected revealed that 2013 had very few fatalities and was helpful to understand the environmental conditions that cause avian botulism.

Students Experience Lake Charlevoix

Over 320 middle school students boarded the Beaver Islander ferry and rotated through 7 hands-on water science stations on **Lake Charlevoix**. Students Experience Lake Charlevoix is a partnership with Watershed Council, Lake Charlevoix Association, and Beaver Island Boat Company.



Click on the video to see what they learned.





YouTube

Healing the Bear

Click on the video to see a recap of the event and interviews with first time volunteers.



In 2013, 79 community volunteers removed 11 cubic yards of trash and recyclables from the **Bear River** between Walloon and Little Traverse Bay. They were rewarded with breakfast, lunch, and t-shirts from local sponsors, for participating in ongoing efforts to "Heal the Bear"

Volunteer Stream Monitoring

In 2013, over 140 volunteers helped monitor 37 sites on 15 different rivers and creeks!

Volunteer stream monitors perform biological monitoring, collecting aquatic insects and other macroinvertebrates that are used to assess stream ecosystem health.

[Click here to view/download the 2013 Stream Monitoring report.](#)



Volunteer Lake Monitoring

**During the summer of 2013,
58 volunteers helped monitor water
quality at 32 stations on 24 lakes.**



Tip of the Mitt Watershed Council has coordinated our Volunteer Lake Monitoring program since 1986. The Watershed Council provides training, equipment, and technical support to volunteers who provide a wealth of data which is used to assess the water quality and biological productivity of our lakes.

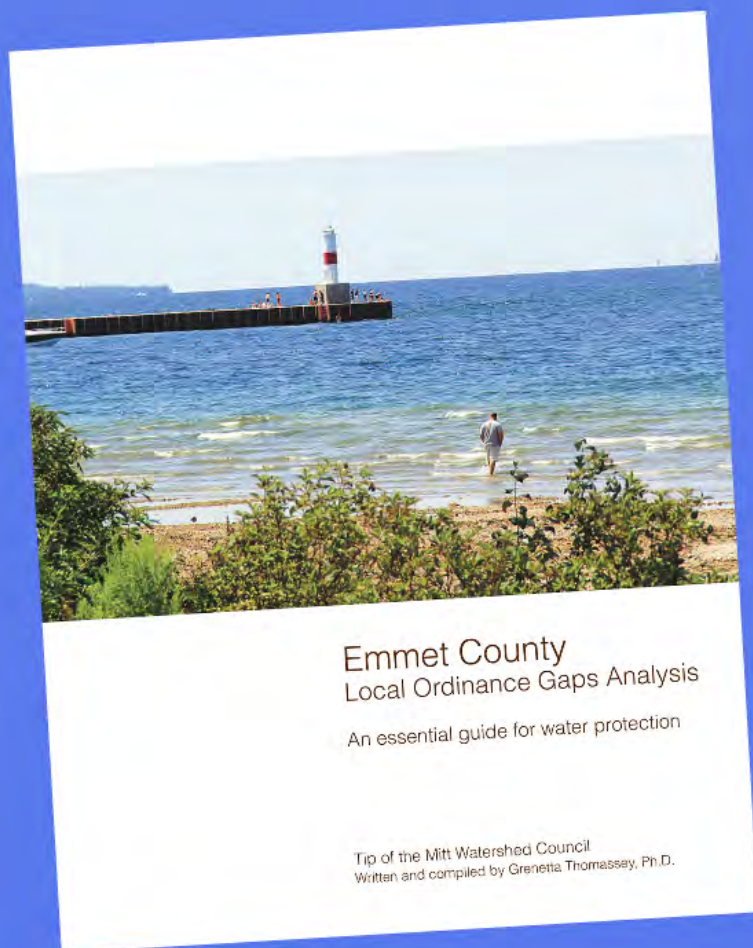


In 2013, the Prescription and Over-the-counter Drug (POD) Program disposed of **3,429 pounds** of unwanted medications.

The POD program was initiated to address the growing concern of unused and expired pharmaceuticals polluting our waterways, poisoning our children, and putting our public safety at risk. The program provides the opportunity for citizens to safely dispose of prescriptions and over-the-counter medications for free at community collection events and permanent collection boxes at local law enforcement agencies.



Emmet County Gaps Analysis Published



The **Little Traverse Bay Watershed Plan Advisory Committee** hosted its 2nd Annual Local Government Event, featuring the release of the Emmet County Local Ordinance Gaps Analysis.

The goal of the Gaps Analysis project was to evaluate existing water-related ordinances in our four county service area and to make recommendations for improvement.

Visit our website to view or download a copy of this publication.
<http://www.watershedcouncil.org/resources%20and%20publications/>

Paradise Lake Boat Washing Station



Tip of the Mitt Watershed Council served on the 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 installation of a rain garden adjacent to the boat washing station.

Policy & Advocacy

Line 5 Pipeline



Policy & Advocacy

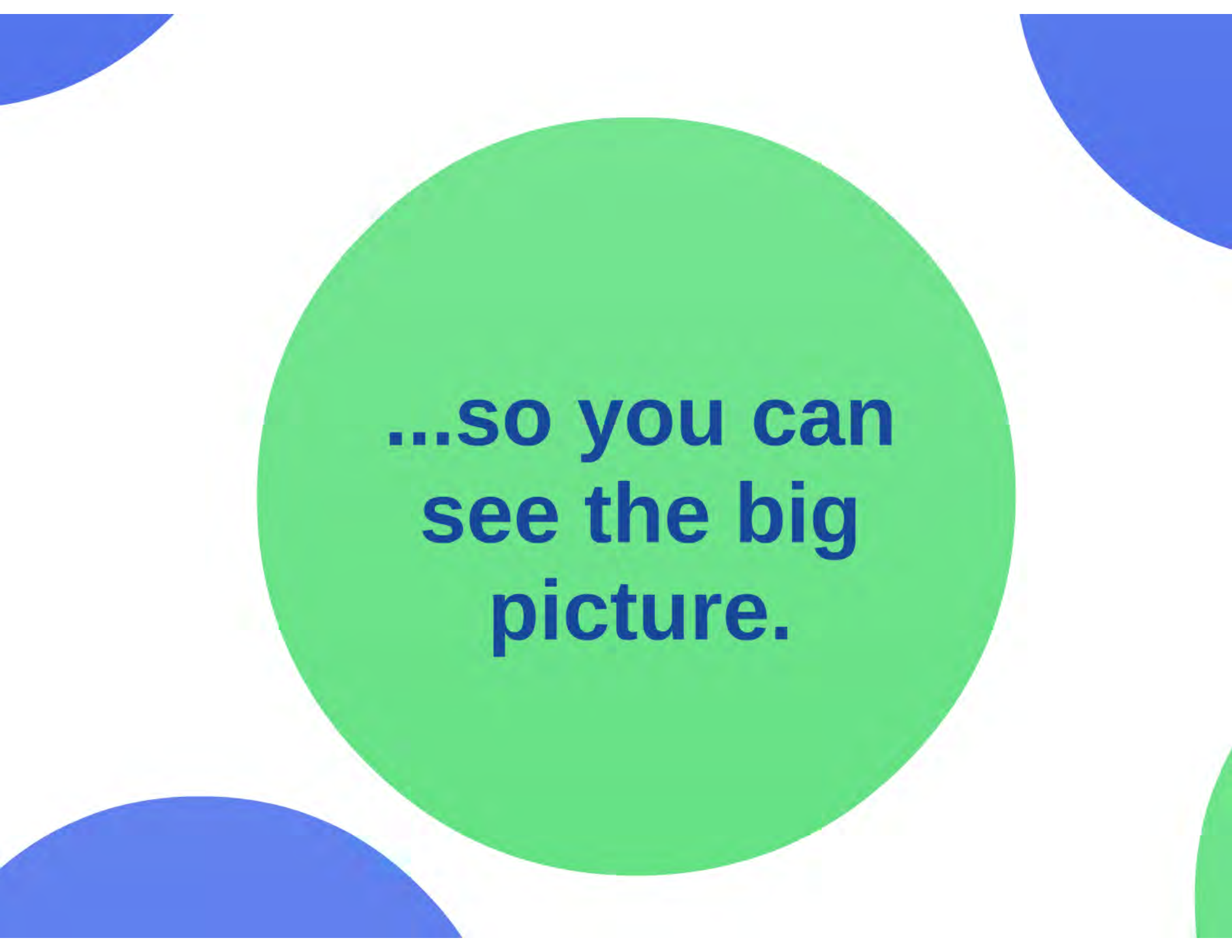
Hydraulic Fracturing in Michigan

Policy & Advocacy

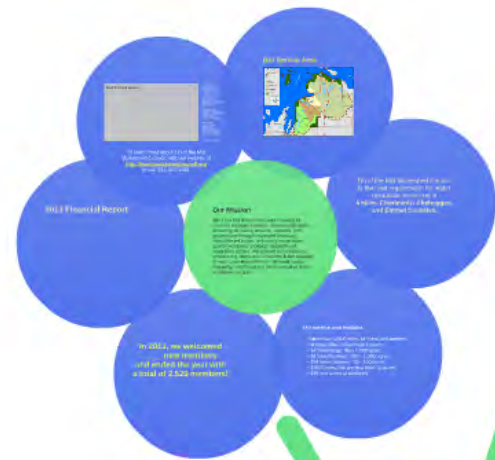
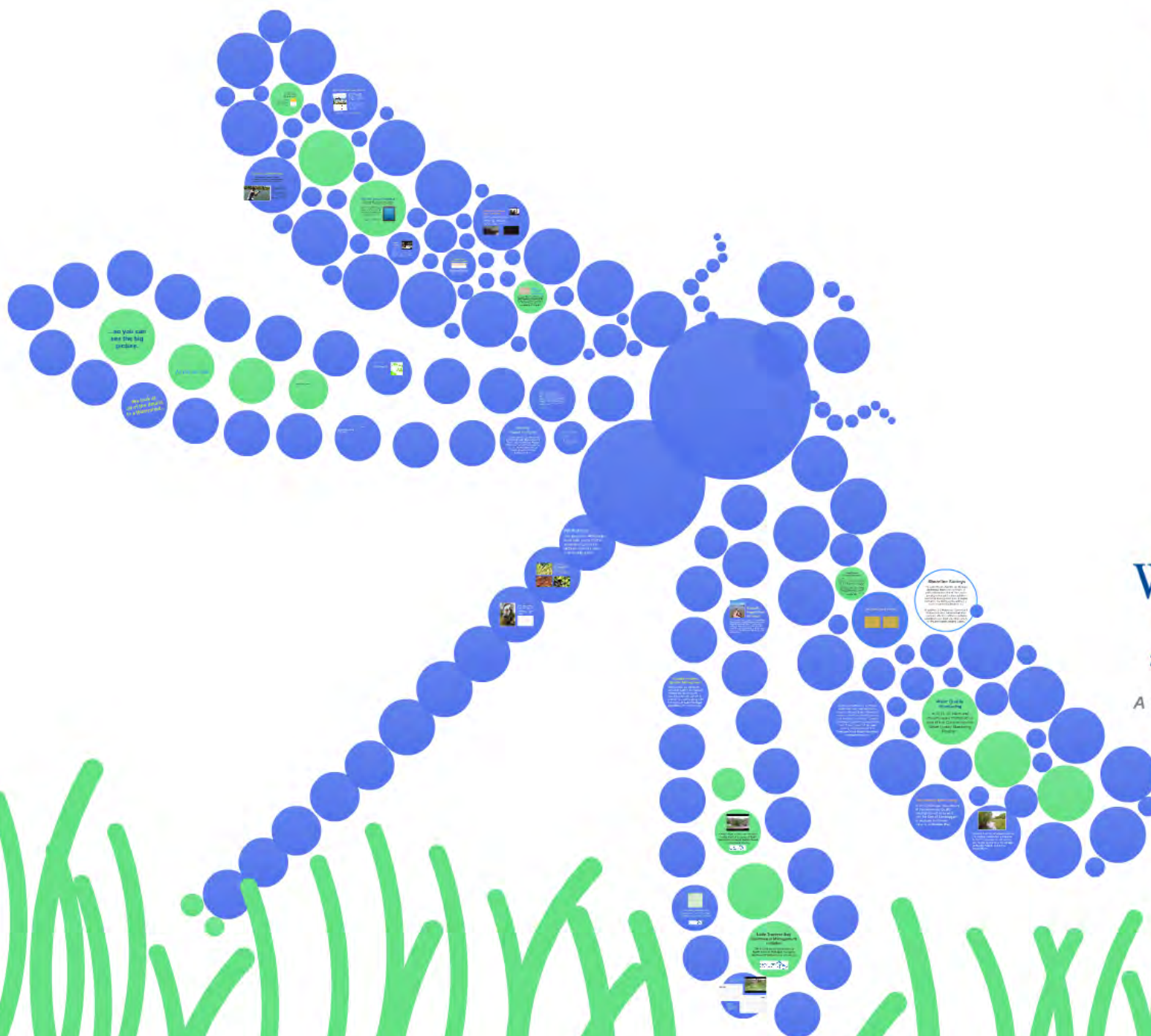
Wetlands Policy Work

As you can see

**We look at
all of the details
in a Watershed...**



**...so you can
see the big
picture.**

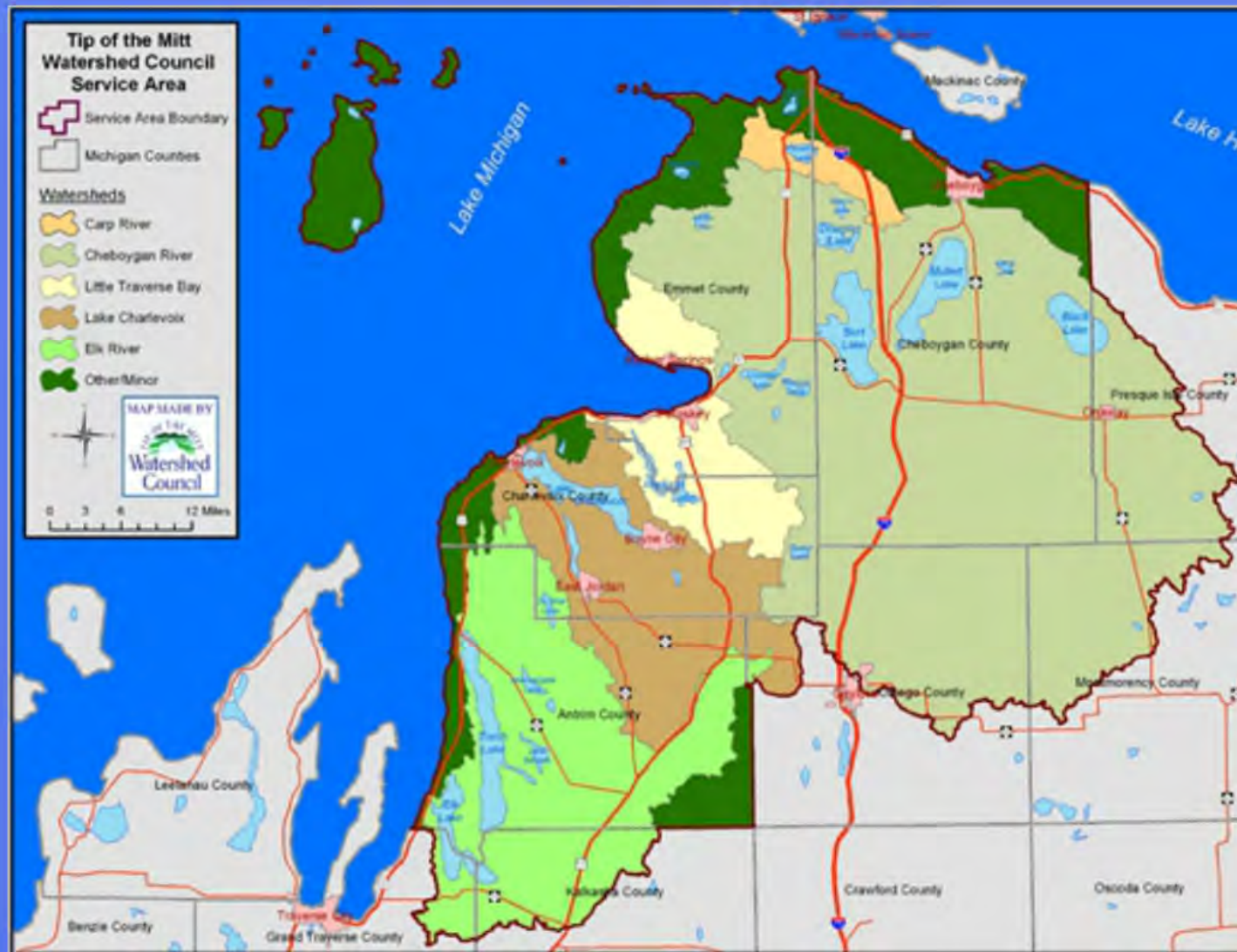


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Our Mission

Tip of the Mitt Watershed Council speaks for Northern Michigan's waters. We are dedicated to protecting our lakes, streams, wetlands, and groundwater through respected advocacy, innovative education, technically sound water quality monitoring, thorough research and restoration actions. We achieve our mission by empowering others and we believe in the capacity to make a positive difference. We work locally, regionally, and throughout the Great Lakes Basin to achieve our goals.

Our Service Area



Tip of the Mitt Watershed Council
is the lead organization for water
resources protection in
**Antrim, Charlevoix, Cheboygan,
and Emmet Counties.**

Our service area includes:

- More than 2,500 miles of rivers and streams
- Multiple blue-ribbon trout streams
- 14 lakes larger than 1,000 acres
- 38 lakes between 100 - 1,000 acres
- 184 lakes between 10 - 100 acres
- 1,600 lakes that are less than 10 acres
- 339,000 acres of wetlands

**In 2013, we welcomed
_____ new members
and ended the year with
a total of 2,529 members!**

2013 Financial Report

2013 Staff and Interns

Back Row:

Kevin Cronk
Sandy Schreck
Meredith Cote*
Daniel Shumway*
Dan Myers
Grenetta Thomassey
Jennifer Gelb

Middle Row:

Samantha Christian*
Annie Rouse*
Lynn D. Buffington

Front Row:

Kristy Beyer
Jennifer McKay
Anne Strawbridge*
Gail Gruenwald

**Summer intern*

To learn more about Tip of the Mitt
Watershed Council, visit our website at
<http://www.watershedcouncil.org>
or call 231-347-1181.