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## *Groundwater, Wisconsin's Buried Treasure*



Around 95% of Wisconsin's communities rely on groundwater as their primary source of drinking water. The great thing about groundwater is that it is a natural resource that can be replenished from either rain or snow melt that infiltrates into the ground over time. Not all groundwater comes from the Great Lakes or Canada like some might believe. In fact, most of the water that is pulled from a residential well probably infiltrated into the ground within a quarter mile away.

Water is considered to be the universal solvent and will dissolve small amounts of elements that it comes in contact with while moving through the ground. Potentially, chemicals that are applied to the soil surface will also dissolve and find its way into our groundwater.

Homeowners with private wells are encouraged to test their water annually to make sure it is clean and bacteria free. One compound that is an issue with our groundwater is nitrate. This compound is very mobile and can be very unhealthy in higher concentrations. In drinking water, concentrations greater than 3mg/L typically indicate soil contamination while concentrations of 10mg/L or greater can lead to blue-baby syndrome. The EPA (Environmental Protection Agency) has set 10 mg/L as the federal safe drinking standard; water should not be consumed if the levels are higher. The primary source of nitrate in groundwater can be pinpointed to nitrogen fertilizers being applied to crops or lawns and failing septic systems.

Groundwater quality directly relates to lake water quality as well. Especially, when it comes to lakes within Marathon County because several of the Eastern Lakes are groundwater fed. It's important that the land uses that occur around the lake do not jeopardize the buried treasure that lies within the soil.

You might ask yourself, what can I do to make sure my water is safe to drink and is bacteria and nitrate free? The Marathon County Health Department provides convenient, reliable, and reasonably priced water testing services to the citizens of Marathon County. Please contact either Cheryl or Deanna from Marathon County's Health Department at (715) 261-1908 for any questions or concerns.

Keep up to date with events, articles, and other lake news at our new revamped Facebook page!

<https://www.facebook.com/EasternMarathonLakes/>



# Potential Funds for Shoreland Restorations & Shoreline Plants

Marathon County Conservation Planning & Zoning Department (CPZ) is applying for a Lake Protection Grant which will help cover most of the cost for trees, shrubs, and materials needed to restore vegetated buffers along the shorelines of our lakes. You can help yourself and Marathon County by contacting CPZ staff and expressing an interest in restoring a vegetated shoreland buffer along your shoreline. The more people interested in restoring their shoreline increases the potential that Marathon County will obtain funding through this grant. CPZ staff is asking for your help to reach out and become a Eastern Marathon County Lake Steward!

## What is a shoreland buffer?

A shoreland buffer is an area of protected vegetation along the water. An established buffer should contain a combination of native trees, shrubs, and groundcovers to a depth of at least 35 feet from the ordinary high water mark of the lake. A shoreland buffer that extends 35 feet has been scientifically proven to reduce erosion, provide wildlife habitat, and filter pollutants in surface runoff.

## Why would I want to restore a vegetated buffer along my shoreline?

Lake Health: It is the easiest way individual property owners can protect and improve the quality of the lake. Naturalists know that a shoreline containing a variety of native plant

species protects water quality, makes for better fish and wildlife habitat, slows erosion, and improves the natural scenic beauty of the lake.

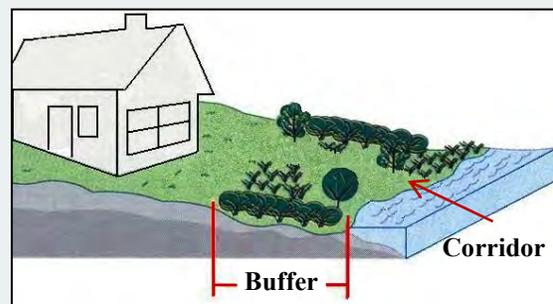
Increased Property Values: Properties on lakes with natural shorelines and clearer/cleaner water command significantly higher property values than properties that are located on poor water quality lakes. Flourishing vegetated buffers provide some of the most effective protection for the water quality of Marathon County's lakes and streams.

Cost Effective: Once a buffer is restored it can be less expensive and less time consuming than maintaining a lawn. More time and more money in your pocket means more time you will be able to spend on the lake.

## Here's how it works:

Contact Tyler Betry, Shoreland Protection Technician, at 715-261-6027 or by email at [tyler.betry@co.marathon.wi.us](mailto:tyler.betry@co.marathon.wi.us) to discuss interest in restoring your shoreline. Mention you would like some assistance for paying for the plants needed for the restoration. We will then put you on a list of possible restorations to be funded.

***There is no commitment at this time.*** If CPZ is successful in obtaining the grant, staff will contact you to start the restoration process. Staff will evaluate your shoreline and work with you in the spring to confirm what types of native plants are well suited for your shoreline to effectively establish a shoreland buffer.



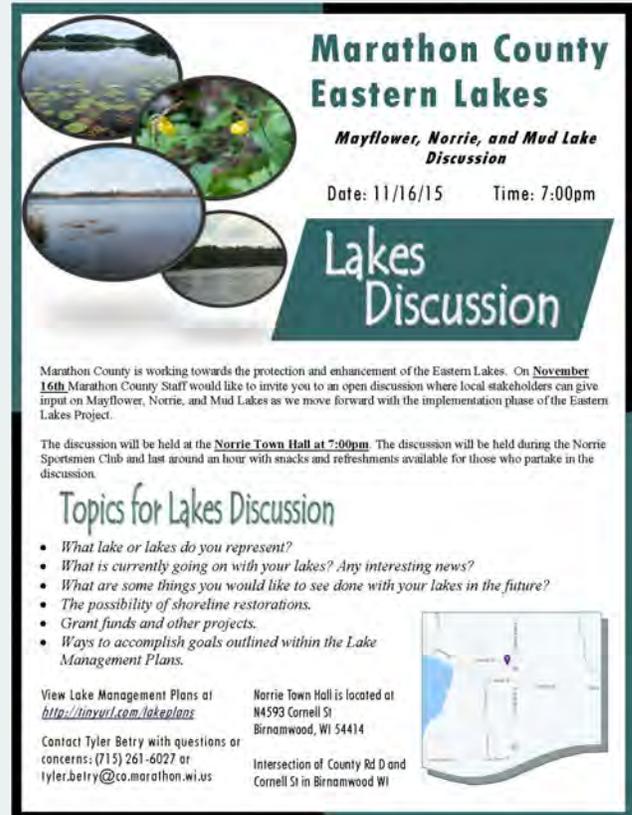
Based on the results from the Eastern Marathon County Lakes Project, we now realize the importance of developing a healthy shoreland along with weed harvesting to further enhance the water quality of our lake.

~LeeAnn Podruch, Pike Lake Sportsmen Club VP

## Lake Discussion Meetings & Outcomes

Over the past few months Marathon County Conservation, Planning and Zoning (CPZ) staff has been hosting lake discussions for our eastern lakes residents. During these discussions the attendees and CPZ staff conversed about the future of the Eastern Marathon Lakes Program and the how to implement the goals within the Lake Management Plans. Some of the topics discussed were shoreland restorations, high nitrates in drinking water, grant funds, and lake events. The input that was shared will help CPZ apply for a lake protection grant. These funds will be used to create a large scale shoreland

restoration which will be used as a “Demonstration Site.” CPZ has partnered up with the Parks, Recreation, and Forestry Department to restore over 575 feet of shoreline and place a 300 ft<sup>2</sup> rain garden at Mission Lake County Park. Erosion of the shoreland has led to sedimentation in the littoral zone within the lake. The shoreland restoration and rain garden will fix these problems. Other lake projects will be pursued with the funds of this grant from the input which was shared by the attendees at these discussions. Keep posted to hear about the other projects in the near future.



**Marathon County Eastern Lakes**  
*Mayflower, Norrie, and Mud Lake Discussion*  
 Date: 11/16/15 Time: 7:00pm

**Lakes Discussion**

Marathon County is working towards the protection and enhancement of the Eastern Lakes. On **November 16th** Marathon County Staff would like to invite you to an open discussion where local stakeholders can give input on Mayflower, Norrie, and Mud Lakes as we move forward with the implementation phase of the Eastern Lakes Project.

The discussion will be held at the **Norrie Town Hall at 7:00pm**. The discussion will be held during the Norrie Sportsmen Club and last around an hour with snacks and refreshments available for those who partake in the discussion.

**Topics for Lakes Discussion**

- What lake or lakes do you represent?
- What is currently going on with your lakes? Any interesting news?
- What are some things you would like to see done with your lakes in the future?
- The possibility of shoreline restorations.
- Grant funds and other projects.
- Ways to accomplish goals outlined within the Lake Management Plans.

View Lake Management Plans at <http://tinyurl.com/lokeplans>

Contact Tyler Betry with questions or concerns: (715) 261-6027 or [tyler.betry@co.marathon.wi.us](mailto:tyler.betry@co.marathon.wi.us)

Norrie Town Hall is located at N4593 Cornell St Birnamwood, WI 54414  
 Intersection of County Rd D and Cornell St in Birnamwood WI



## Do it Yourself Ice Picks

With the days getting colder and the ice getting thicker it’s time to bust out the ice fishing gear. You might ask yourself, “when is the ice safe to fish?” There really is no true answer for this question. You cannot judge the strength of ice by appearance alone. Ice picks can be used to pull yourself out of frigid water and to safety. Ice picks are a great tool that can provide piece of mind whenever you are on the ice.

Here are some instructions for DIY ice picks in case you find yourself in a scary situation.



1. Obtain two 4” pieces of wooden doweling the size of a broom handle or a little larger. Whatever material you select, it should float in case you drop the picks while struggling.
2. Drive a nail into one end of each dowel with the head of the nail sticking out at least an inch and a half. Use a

- large concrete nail for strength and durability.
3. Use a file to sharpen the nails heads to a point.
4. Drill a hole into the dowels (in the end opposite the nail) and tie a length of cord through the hole so a pick is on each end “jump-rope” fashion.
5. You may drill a hole in the ends alongside the nails so the nail on the other pick can nest inside the hole, keeping both points covered.

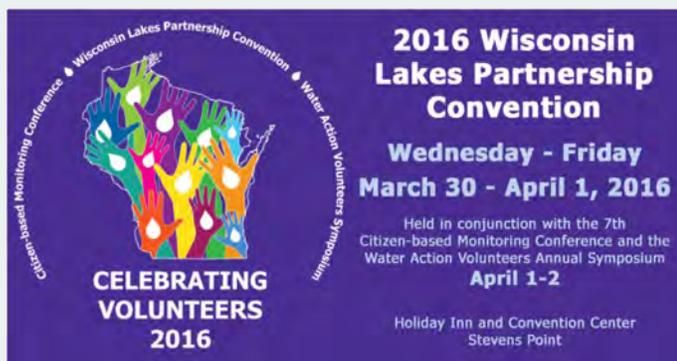
Keep these picks in your pocket for quick access if you or a companion breaks through the ice.



Pictures and instructions brought to you by the WI DNR.

Marathon County CPZ  
210 River Drive  
Wausau, WI 54403-5449  
715-261-6000

Do you have suggestions for articles or photos to share? Or would you like to receive an electronic copy of this newsletter Please contact:  
Tyler Betry 715-261-6027  
tyler.betry@co.marathon.wi.us



## Lake Events

Here are a few events about to happen in or around the Eastern Lakes area. If you know of or would like to have any future lake events announced in the Eastern Lakes Times please contact Tyler Betry at 715-261-6027.

**Norrie Fisherec – February 20th.** The event starts at 8am with food and refreshments available throughout the day. Cash prizes for largest fish for every category (walleye, crappie, pike, etc.). Also raffle drawings for cash and prizes.



**2016 Wisconsin Lakes Partnership Convention - March 30-April 1.** Registration will begin in February. Celebrate and learn more about Wisconsin's lakes at the 38th annual Lakes Convention. The event will take place at the Holiday Inn and Convention Center Stevens Point.



## Featured Native Plant

### Wild Lupine: *Lupinus perennis*

It was recommend by an Eastern Lake shoreland owner that we include a featured native plant for every issue of our newsletter. The first featured plant is the Wild Lupine. This native species can be seen blooming along sandy and sunny shorelines in early spring. At a distance this flower may be mistaken for the invasive plant purple loosestrife because they share the same purple color but don't be fooled! Lupine's are great for enhancing soil fertility by fixing

atmospheric nitrogen into a useful form into the soil. The endangered species Karner blue butterfly caterpillars only feed on the leaves of wild lupines. So if you are looking to attract beautiful butterflies and enhance your soil, this plant is your best bet!



Wild Lupine - *Lupinus perennis*