

Portage Lake Report



Life Under the Ice

by Elayna Grody

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With winter here, many enjoy ice fishing. Though I prefer not to sit on a cold bucket staring at my line going down into a hole, I do often wonder about the fish and other animals that have to live under the ice.

Ice, that is, water is an amazing thing. As most matter goes from a liquid to a solid it gets more dense. But for water, it is its most dense at 39° F and then expands, getting lighter and floating as it freezes. I know first hand about that expansion part because the water in my plumbing expanded last winter as a pipe froze and burst. My insurance agent wasn't too thrilled about that particular aspect of water.

It is a good thing for the fish that it expands and floats though. The ice forms an insulating layer over the water and protects it from the colder air temperatures. Snow on top of the ice acts as an additional layer and is a better insulator than the ice. This helps to keep the entire lake from freezing down to the bottom.

While in summer the cooler water is at the bottom of the lake, in winter it is the opposite. The most dense 39° F water is at the bottom and it gets colder as it gets closer to the top. The water just under the ice is 32° F.

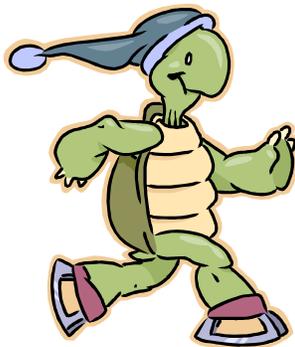
But it is not the cold that is a problem for the fish and other animals under the ice. It is the depleting amounts of food and oxygen that can be trouble. Once the lake freezes over completely, the amount of oxygen and food has to

last until the ice melts several months later. To make matters worse, decaying plant material uses oxygen in the process.

Fish and other animals deal with this is by slowing down their metabolism; by becoming less active, they don't need as much oxygen and food to survive. Largemouth, smallmouth and walleye stay in the deepest and warmest part of the lake, while sunfish nestle down in the plants. However, cold water species of fish like trout are active all winter. They survive by eating minnows and smaller fish that are easier to catch at this time because those fish are slower.

Frogs and turtles also slow down their metabolism and some even go into hibernation in the soft mud on the bottom of the lake. Both frogs and turtles stop using their lungs in the winter. Instead, frogs take in oxygen through the skin over their entire body. Turtles take in some oxygen through the skin on their throat, but most is absorbed through the skin on their cloacae – the opening to their reproductive and excretory systems. To put it in laymen's terms – they breathe through their butt. I'm glad I'm not a turtle.

Some turtles move around under the ice on warmer days. Many times I have looked through clear portions of ice to see a turtle underneath. You should look for them when you are on the ice this winter; perhaps while sitting on a cold bucket staring at your line going down into a hole...



Chairman's Report:

Committee Plans a Busy 2010

Since the first *Friends of Portage Lake* newsletter was printed in October, we have remained active as a committee. We continue to move forward by meeting monthly to share ideas and educate ourselves on how to best care for our lake.

In October, two of our committee members, Greg Dedes and Phil Kline, attended a training session held near Cadillac on lake management funding and special assessment districts. We also joined the Michigan Lakes & Streams Association which costs \$50 for an annual membership and offers education and support. The committee discussed possible fund raising activities to help offset the costs of monitoring the lake and invasive weed control. We decided to help host a triathlon that will be held in the area in June, and to hold a pancake

breakfast in August at Klines Resort. Please stay tuned for ways you can be involved in these efforts to help raise funds for our lake.

In November, Greg and I attended the Mendon Township meeting to update the board on the things we were working on for the lake. The township board was supportive of our efforts and asked that we keep them informed of any new developments.

Our plans for early 2010 include participation in a volunteer lake monitoring training so that we can begin monitoring the lake this spring. We will request formal proposals from two lake management companies for invasive weed management. We

will also develop a Friends of Portage Lake website.

I'd like to thank those of you who donated funds to this work following the distribution of the first newsletter. Please see the information at the conclusion of this publication if you have a desire to help in this way. Questions or comments can be directed to the point person for your area (see the list of committee members on page 1).

See the progress of our new website:
www.portagelakefriends.org

Thank you for your continued support and encouragement of these efforts to

maintain and improve our beloved lake.

Mark Parks
Chairman



Inaugural Race Date

Saturday, June 12, 2010

Sponsored by Friends of Portage Lake

Distances:

Swim - 400 yards

Bike - 11.5 miles

Run - 3.1 miles

Relay teams are allowed

Portage Lake offers a very clean swim venue. The bike route around the lake is flat and fast. The run course is a mix of paved road and hard packed trail.

More data coming soon. Visit our web site at www.doubletimetri.com

The Formation of Portage Lake: It Rained Ice Bergs!

by Elayna Grody

If you are like me, sometimes you sit by the lake and contemplate - with a beverage. What is the meaning of life? Why are we here? Why is this lake here? While I probably couldn't do a good job answering the first two questions, I did a little research and found out some pretty interesting facts about the beginning of the life of our lake.

Many of you probably know that Michigan was formed during the ice age when glaciers covered all of our state and reached as far south as southern Indiana and Ohio in the Midwest. The last glacier to inhabit these parts was the Wisconsin Glacier that lasted from 25,000 years ago to 10,000 years ago. The portion of the glacier that was over our lake was called the Laurentide

Ice Sheet. It covered 5 million square miles and was 1.5 to over 2 miles thick. It weighed so much that it depressed the Earth's crust by as much as 2,300 feet! Scientists say the ground is still in the process of rebounding from it.

Glaciers are like a gigantic bulldozer of ice plowing over and through anything in their path. They carry with them tons of boulders, rocks, sand, dirt and anything else that gets in their way. Though

many lakes were formed from glaciers digging them out as they move forward, Portage Lake was formed when the glacier was melting.

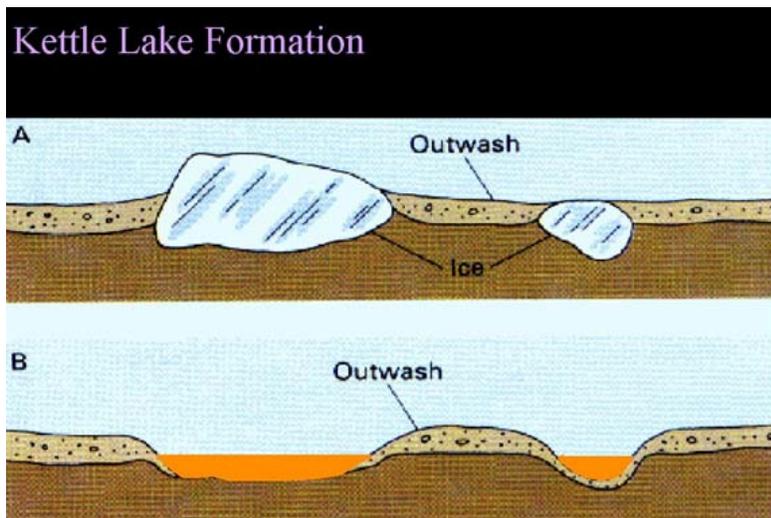
Imagine looking up at the front edge of the glacier that was over 1 mile high. You feel so small as you stand there with your feet getting soggy in the moist ground. Then you hear a large "CRACK", almost like a bomb went off. You look up to see what caused the noise and

river are called kettle ponds, kettle bogs or kettle wetlands. At 510 acres, ours is one of the larger kettle lakes. The majority of the large lakes and ponds in the Portage River Watershed are kettles.

As the glaciers melted, they dropped the rocks, gravel and sand they were carrying. The areas where these materials were dropped are called "outwash plains" - kind of like a river delta. The

soils under and around our lake are classified as "Oshtemo-Spinks" because they are well drained, loamy sand soils atop the outwash plains.

Another good thing created by the glacier is all the wetland that surrounds and protects our lake. I will go into further detail about their benefits in a future article.



you see a large - okay, we're talking the size-of-our-lake HUGE - piece of the glacier falling down in your direction. Somehow you manage to get out of the way just in time as the huge iceberg plunges deep within the wet ground. A small earthquake rumbles through the area from the impact. Pretty cool, huh!

That is how "kettle lakes", like ours, were formed. Most kettles are small and if not fed by a stream or

So, the next time you are sitting by the lake contemplating life with a beverage, raise a toast to the awesome way our lake was created.



Website of the Month

[www.wmich.edu/glcms/
watertrails/rivercountrypr.html](http://www.wmich.edu/glcms/watertrails/rivercountrypr.html)

Learn about the Michigan Heritage Water Trail that begins here at Portage Lake.

Friends of Portage Lake

c/o Kathy Kauffman
56112 Angevine Rd.
Mendon, MI 49072

www.portagelakefriends.org

Become a "Friend of Portage Lake"

We are delighted with the response we are getting from our "Friends of Portage Lake".

Many thanks to those of you who made donations. We appreciate your support and interest.

We are looking forward to upcoming events and efforts to improve our lake conditions and thank you all for joining us in those efforts. See you in the spring.

Happy New Year to all of you.

Sincerely,
Kathleen Kauffman, Treasurer
Friends of Portage Lake

I'm a Friend of Portage Lake!

Check all that apply, clip & mail to the address below:

- Contribution enclosed:
\$_____ (Thanks!)
- Interested in lake monitoring training.
- Volunteer to help with fund raising and other activities.
- Other:

Name: _____ Phone: _____

Address: _____

Email: _____@_____

Clip and return to: Friends of Portage Lake, c/o Kathleen Kauffman,
56112 Angevine Road, Mendon MI 49072

