



Portage Lake Newsletter

A Natural Shoreline: A Better decision for you, your lake and your wallet

Lake Stewards can help keep your lake healthy by using ecological principals to maintain a natural shoreline. Having a buffer at the shoreline helps prevent erosion, which saves you from a loss of shoreline property and increased sedimentation in the water. Erosion and sedimentation causes poor water quality. Seawalls and natural shorelines (also known as bioengineering or "lakescaping") are two types of buffering systems.

Seawalls are often perceived as a more stable system and therefore used more often, but in fact they are less stable, more damaging to the lake ecosystem, and typically cost much more money to install and maintain over the years. Seawalls do not allow for absorption of energy from waves hitting the



wall, causing wave energy to force back into the lake, causing more erosion and loss of sediment at the base of the wall. Seawalls also lead to negative impacts on fish, turtles, amphibians, etc while a natural shoreline or "lakescape" absorbs some if not all the energy from waves and wind.

Lakescapes use native plants, biodegradable products and natural materials to provide a stable shoreline to protect from erosion with providing ecological features, a living buffer, that adapts over the seasons and years. A few of the benefits to using native plants, grasses and shrubs are: providing food and habitat; minimal maintenance; provides shade which lowers air and water temperatures; attracts birds leading to decreases in insects; root systems anchor soil in place; sustains biodiversity and helps keep out exotic species such as Phragmites and Purple Loosestrife; filters more water than turf grass; reducing geese on your property as geese like to see their predators and prefer manicured lawns and seawalls.

SAVE THE DATE

When: Thursday, July 26, 2018

Where: Onekama Village Farr Center

Who: Portage Lake Ripirains and anyone interested in natural shorelines and protecting our watershed!

What: A Shoreline Stewardship Program will be presented to the Portage Lake Garden Club by Julia Kirkwood from the Michigan DEQ. The Portage Lake Watershed, Manistee Conservation District and Plant IT Wild will partner with the Garden Club to make this a county wide program. Misty Ridge Nursery from Mesick will have native plants available for sale at the program!

The focus of the program will be to share information and specific examples on Portage Lake of how shoreline owners have managed their lakefront property to benefit the health of our lake.

HOW LONG Until It's Gone?



Plastic Coated Paper

3 Months



Balloons

6 Months



Milk Carton

5 Years



Plastic Bags

10-20 Years



Styrofoam

50 Years



Rubber Boot Sole

50-80 Years



Beverage Holder

400 Years



Disposable Diapers

450 Years



Plastic Bottles

450 Years

Source: namepa.net • scdhec.gov • NOAA.gov • begreenpackagingstore.com

Portage Lake
Watershed
Forever

Onekama Township Board Members

David Meister, Supervisor
Michelle Johnson, Clerk
LaVonne Beebe, Treasurer
Bob Blackmore, Trustee
James Wisniski, Trustee

Invasive Species Committee

Ted Lawrence
Herb Lennon
Mary Reed
Chuck Reed
Jim Simons

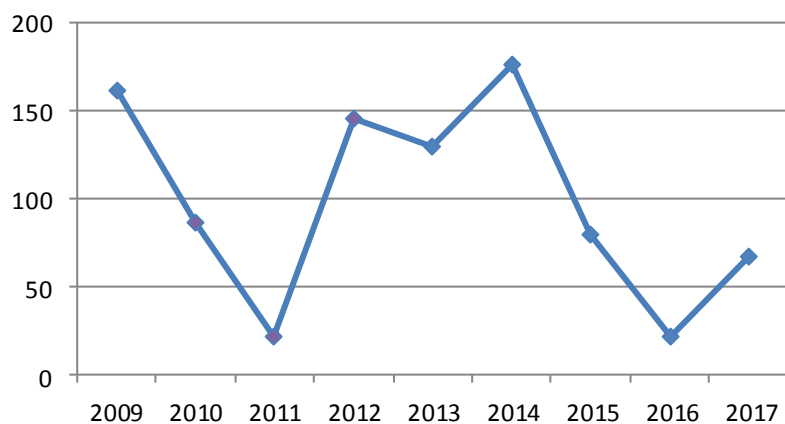
Lake Manager

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Portage Lake Newsletter

Acres of EWM Treated Annually



Portage Lake 2018 Management Plan

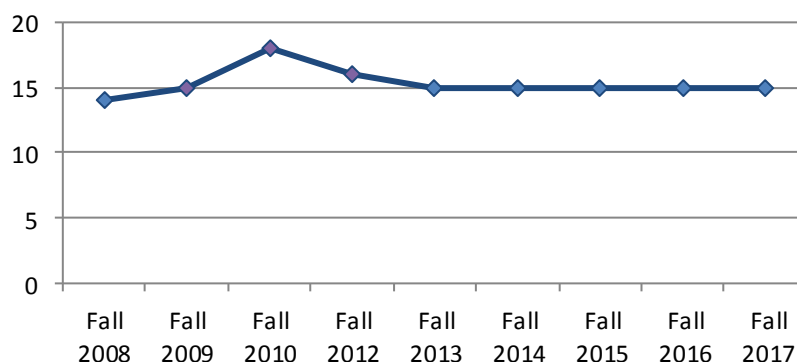
The last two winters were warmer than average, with less snow and ice coverage. The spring of 2018 was unseasonable cold, which has led to many lakes having a reduced amount of aquatic vegetation early on into the growing season. Exotic species can thrive off of changes in weather patterns and Eurasian watermilfoil (EWM) specifically can grow and live under the ice. We need to ensure that surveys and monitoring the lake continues in order to stay on top of any changes in the plant community in Portage Lake. Plant and algae production can vary seasonally and the program will respond with required treatments based on up to date surveys. In 2017, a decrease in the infestation of exotic plants was found. Moving forward, this may fluctuate some, but is signaling a positive response to the management efforts and program on Portage Lake. If you have specific questions on the program, please contact your lake committee or PLM. Enjoy a beautiful summer on Portage Lake!

Portage Lake Review

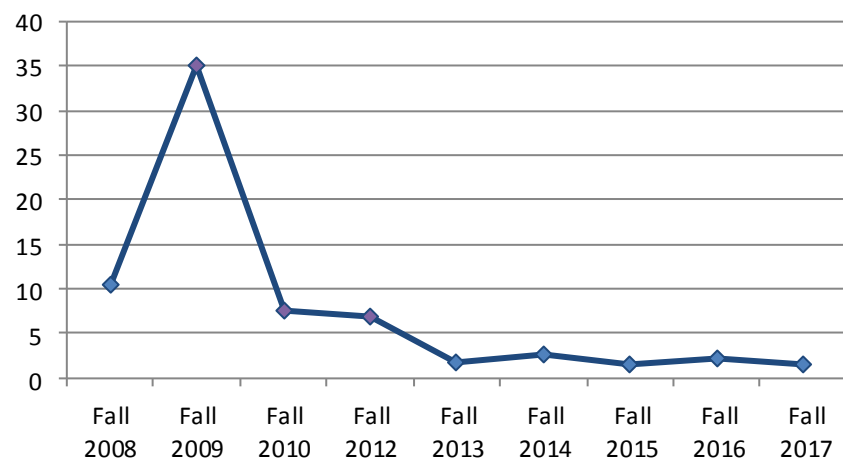
In 2017, just under 68 acres of Eurasian watermilfoil (EWM), Phragmites & Purple Loosestrife were managed in and around Portage Lake. As the graph to the left shows, the overall acreage of the EWM infestation has decreased over time, requiring substantially less treatment than when the program began. However, this does not mean our work is done. The Portage Lake Management Program is in place to continually monitor Portage Lake and keep the exotic plants under control, an annual maintenance program.

The abundance of healthy native plants in Portage Lake increases the long term stability of the lake and that is shown in the below graph. The native plant community is tracked annually, has been protected and is quite strong with over 14 native plant species found annually. Native plant populations will vary seasonally, but have remained strong despite the exotic plant control measures. Proper exotic plant control will selectively target exotic species, while promoting native plant growth.

Number of Native Plant Species present in Portage Lake



Cummulative Coverage of EWM



Water Quality Updates

While some water quality parameters have maintained themselves with little change over the years, other parameters have shown some fluctuations. One of the most important parameters to test is Total Phosphorus (TP). After finding a decrease in TP in 2015 and 2016, and a general downward trend, in 2017 TP concentrations increased slightly. Although levels are only enriched and not highly enriched, the two-year trend down was not found in 2017. Some of the fluctuations in other parameters include showing that the tributaries around Portage Lake are bringing excess nutrients into the lake. This information is vital in determining the areas within Portage Lake that need to be focused on reducing nutrient loading to help reduce the productivity in Portage Lake. Please see the Portage Lake—Lake Management Plan, found on the Onekama webpage, for more details on the program.