PLM Lake & Land Management Corp. **Great Lakes Division**

"To provide the highest quality of aquatic plant management services available. Striving to implement new technology and diversity of services to manage our unique aquatic ecosystems. Seeking and retaining educated, experienced professionals, to ensure that each service we provide is exploited to the maximum extent possible" - PLM Mission Statement

Spotlight Lake, Eagle Lake Texas Township

Eagle Lake is located in Kalamazoo County, Texas Township. It is approximately 251 acres with an average depth of 5.1 feet and a maximum depth of ~II feet. Given its shallow nature, Eagle Lake is able to support aquatic plants throughout the entire lake grows a considerable amount of vegetation. Each year, the plants grow during the summer and die off in the fall. The Lake Association and lake residents have become increasingly concerned that this cycle of plant growth is contributing to the buildup of organic sediments (MUCK) and how this build up is fueling excess plant growth.

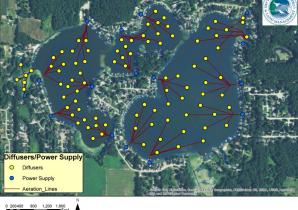
Like people, lakes have a metabolism. When we consume more calories than we use, we store it as

fat. With lakes, it is possible to grow vegetation faster than bacteria can decompose it. This can lead to the buildup of muck. In some cases, bacteria may be limited by the amount of oxygen at the lake bottom. This, in turn, can slow a lake's metabolism.

In 2017, PLM Lake and Land Management installed an Airmax aeration system on Eagle Lake. The system consists of 16 Airmax compressors which supply air to 93 diffusers strategically located throughout the lake. Air is pumped by the compressors through nearly ten miles of weighted airline run on the lake bottom. When the air reaches the diffuser, several thousand small air bubbles are created. These bubbles rise to the surface and produce an upward current. Water at the lake bottom is lifted to the surface where oxygen is replenished by the atmosphere.

system was specifically designed to completely turn over/mix the lake volume (~ 421 million gallons) one time per day. In addition to aeration, naturally occurring bacteria are added to the lake monthly to optimize decomposition.

The 2017 season was the first year of the operation and we look forward to the evaluation of results. Muck build up is a slow process and we do not expect the decomposition of muck to be instantaneous. However, we do anticipate tipping the scales in favor of decomposition by maximizing the amount of available oxygen in combination with addition of bacteria.



CONTACT US:

PO Box 132 Caledonia, MI 49316 In the Grand Rapids Area: 8865 100 St SE

In the Lansing Area: 10785 Bennett Drive. Morrice, MI 48857

Alto, MI 49302

In the Evart Area: 250 South Industrial Dr. Evart, MI 49631

Phone: 800-382-4434 616-891-0371 E-mail: servicegl@plmcorp.net

...over Thirty-five years of invasive plant management



Follow us on **Facebook**

PLM Lake & Land Management, Great Lakes Region has a Facebook page! This page is a great way to provide our customers with up to date information on exciting things happening within our company and the aquatics industry.

WARNING

PLM Is keeping a close eye on the PFAS fisheries concerns. Please contact PLM if you need assistance.



Airmax Diffuser

Expanded Notification Options for PLM Customers

Over the years and as technological advancements have been made, we have worked to improve our communication with our customers. We are pleased to offer two new programs in an effort to improve pre-treatment notification of our visits. Starting in 2018, our contracting entity will receive a copy of the posting sign, which is the same information that is being distributed to each resident prior to the treatment. In order to provide this service, we must have an email address on file. Please contact your account manager to ensure your correct email address is on file. Additionally, in an attempt to enhance our communication directly with lake/pond residents, we can now provide pre-treatment communication via text message to contracting entities as well as lake



residents prior to treatments. This notification will simply reference the proposed treatment date and will not accept reply text messages. This communication option will only be implemented if the client provides PLM with text message numbers. Often times lake residents request notice of our visits for vacation planning, irrigation system shut offs, etc. This program will now offer direct communication to provide further transparency into our management programs. As always, all notifications are tentative and subject to change, likely due to weather, permitting or unforeseen circumstances. If you are interested in using these communication programs for your waterbody, please contact your manager to set up the programs!

Fountain, Aerators and Much More...

Did you know PLM Lake & Land Management is a leader in the Midwest for installing, storing, and maintaining fountain & aeration systems? Through years of experience with competitive



products, we have found Kasco Marine's fountains to be the most dependable and cost effective products on the market. The Kasco Marine product line offers a wide variety of models to suit any waterbody size. Aeration will improve the overall quality of your aquatic ecosystem as well as enhance the beauty of your lake or pond. Please contact your local PLM representative for a recommendation today.

Benefits of Kasco Products:

- * Increased circulation/oxygenation of stratified water helps to stimulate the natural biodegradation of organic "MUCK"
- * Promote consistent source of oxygen therefore improved fisheries.
- Reduce phosphorous levels, reduced algae growth = better water quality

** PLM will be offering free installation on any purchases before May 31, 2018 **







Do you get tired of constantly raking floating weeds and debris from your shoreline? PLM has a rake free solution to suite your needs. PLM is now a distributor for the AquaSweep from Scott Aerator. The AquaSweep keeps your beach front, dock area or canal clean from muck, silt, and bottom gunk while also being fully adjustable to blast algae, trash and floating debris on the surface. The high-velocity water propulsion of the AquaSweep dock mount conveniently pushes bottom debris 50 feet or more, away from swimming areas and boat lifts. The AquaSweep comes with a 5 year warranty, is completely oil free and manufactured with American made stainless steel. Compare with similar products and you'll see why the AquaSweep surpasses anything else on the market in both performance and quality.

Benefits of using the AquaSweep:

* Shoreline enhancement, through immediate water movement, ridding area of floating weeds and debris.



Exotic Species Watchlist, Yellow Floating Heart

A new invasive exotic plant is beginning to make it's way into Michigan lakes. Yellow Floating Heart could be confused with other native floating leaf plants, such as lily pads or watershield. Please learn how to identify this noxious plant and notify your PLM Manager if you suspect it may be growing in your lake or pond.

Identification:

- Flowers are bright yellow with 5 petals, located above the surface of the water
- Leaves are circular or heart shaped
- Found in slow moving waters
- Leaves are alternately arranged on the stem but oppositely on the flower stalk
- Seeds are flat and oval, many seeds per capsule

Local Concern: Yellow floating heart can create dense mats that shade out native aquatic plants, decrease oxygen levels, increase mosquito breeding habitat, and impede boating activity, fishing, and swimming. Fragmented pieces of plants can establish new populations and seeds are engineered to



disperse by attaching to the feathers of waterfowl.

New Treatment Options Available for 2018

The aquatic herbicide Stingray is now approved for use in Michigan! PLM has waited several years to have this new chemistry and active ingredient available to manage Eurasian/Hybrid watermilfoil. Over the last decade, PLM has been constantly using new/different combinations of herbicides, as well as using higher application rates, to help ensure that we do not select for a resistant strain of hybrid milfoil. Stingray will be used in combination with Renovate or Tribune to enhance the herbicide uptake by the plant and provide faster and longer-term control. Please be aware that PLM representatives will be making recommendation to incorporate Stingray into your 2018 management plans.

More good news for 2018, the EPA has approved ProcellaCOR! Although we are still waiting for the DEQ's anticipated approval in 2018, the approval of ProcellaCOR may be the biggest news since the introduction of Sonar in the 1990's. ProcellaCOR is highly effective on all strains of milfoil, has low toxicity and limited restrictions. The introduction of ProcellaCOR may change the milfoil battlefield. Once approved by the DEQ, PLM will be contacting clients for evaluation treatments yet this fall. Be excited, be ready..... ProcellaCOR!

PLM Drone Surveys Coming Soon!

