



PLM
LAKE & LAND
MANAGEMENT CORP

December 1, 2022

Bear Lake Lake Board
c/o Darrell VanFossen
138 N. Bear Lake Rd
Muskegon, MI 49445

Thank you for the opportunity to provide a proposal for management services on Bear Lake. PLM works throughout your area and we are pleased to be able to offer you a management program. PLM has expanded our services, staff, technology and equipment to offer our customers the most educated, dedicated and responsive service time in the industry. As advancements in the industry have been made, PLM has been on the forefront. Some projects and advancements include; working with genetic research on milfoil plants; researching Starry stonewort and its reproduction, treatment and infestation in Michigan; GIS mapping with GPS/GIS overlays; and MI EGLE approved evaluation treatments to name a few. If any additional information or changes to the management proposed are needed, please contact me directly.

Management Program for Bear Lake 2023-2027:

Bear Lake, Muskegon County (410 acres) needs to be properly managed from all aspects, including but not limited to invasive/nuisance plant and algae growth, water quality monitoring, surveying and education of riparians.

PLM's education and experience with lake management allows us to be an all-inclusive lake management service provider giving our customers access to many services and management options. As each lake requires their own specific management tools, the following services are a place to begin in properly managing your lake as a vital lake ecosystem to protect as well as an asset to properly manage for the property owners surrounding the lake. If and when additional management services are recommended and/or if your board wants to discuss the possibility of incorporating further services into the management program, please feel free to contact us. PLM's experience gives us direct knowledge and the ability to offer recommendations in all aspects of lake management on Bear Lake.

In order to properly manage Bear Lake, a diverse and strong native plant community needs to be promoted. This is done in a variety of ways, including by controlling the infestation of exotic and invasive plants. Controlling exotic and invasive species is vital to the overall health of the lake. In addition, monitoring the lake for both plants and water quality parameters is key to the long-term success of the program. Reducing nutrient loading, promoting natural buffers and shorelines are also important when managing the lake. Educating riparian's on lake ecology, protecting the environment and working with all that use Bear Lake to prevent entry of new plants will assist in the long-term lake management efforts.

References: PLM works on hundreds of lakes and ponds across Michigan, divided into four geographical areas. Bear Lake falls within our West MI Territory. PLM works on many lakes in Muskegon County including but not limited to Spring, White, Muskegon, Twin & Mona Lakes as well many in neighboring counties. See attached reference list for more information. PLM has been in business over 40 years and many of our clients have worked with PLM for decades.

Aquatic Plant Control Administration and Inspections

Surveys: Surveying the lake is key to the success of any lake management program. In order to properly manage Bear Lake, a survey program needs to include a variety of surveys and lake visits to ensure the lake is reviewed throughout the season. PLM's management program includes numerous survey visits throughout the season to allow all plants to be documented.

AVAS Surveys of the lake will allow for all vegetation within the lake, native and exotic, to be recorded along with density. An AVAS

Survey (Aquatic Vegetation Assessment Site Survey) is the MI EGLE approved format for surveying lakes. Grid-point surveys may also be used on Bear Lake, when appropriate, and to assist in allowing all survey techniques to be used to collect the most reliable vegetation data. This data is important in determining management plans and treatment areas. A full understanding of the vegetation growing within the lake can indicate problems within an aquatic environment and it is important to have the most detailed surveys possible. An AVAS Survey should be performed in the fall of each season (an additional spring AVAS is optional).

An initial full lake survey in the spring of 2023 will take place to prepare treatment plans and evaluate overall lake conditions. Acre plot maps, as well as GPS technology, will be used throughout the surveys when preparing treatment maps. Please note that board members can accompany PLM in the field for surveys if pre-arranged. This survey will be used to determine the most appropriate, up to date, treatment recommendations based on the current growth in the lake. Following this survey, recommendations will be made which will include treatment locations, product rates and totals, costs, etc. This will be reviewed and approved prior to treatment.

Pre/Post treatment surveys will take place throughout the summer to document plant growth and prepare any additional treatment maps and recommendations. Brief surveys will be done as needed throughout the summer during additional water quality visits, on request or as needed.

Cost per AVAS Survey: \$875.00

Cost per Pre/Post Treatment Survey: No Charge

Information & Education

Lake Newsletter: Annually a newsletter will be sent to all residents of Bear Lake detailing the planned activities for the season. The newsletter will also include information such as: updates on aquatic plant management, goals of the program, plant trends and best management practices. The newsletter will also provide residents with information on proper watershed management practices and new invasive (exotic) plants on EGLE's Watchlist. An updated address list needs to be provided to PLM annually.

Cost of Newsletter Production & Distribution: \$775.00

Administration & Reporting

Treatment Reports: PLM will supply a report detailing treatment areas (including map) as well as products used after each treatment. This report will be forwarded directly to the Bear Lake Lake Board (BLIB).

Cost for Treatment Reports: No Charge

Lake Management Plan: A formal management plan will be completed in the fall of every season. The lake management plan update will include but not be limited to: Yearly treatment summary including location maps, herbicides, rates, quantities and pre/post survey maps; Vegetation survey information including plant species name (common and scientific), plant group, location, and density; Water quality reports; Plant trend graphs and data; Recommendations for the following season. The update gives the control program an overall scope of the activities performed and recommendations for the seasons to come. A yearly management plan will be completed at the end of each season and available in the fall.

Cost of Annual Lake Management Plan Update: \$1,200.00

Meeting Attendance: PLM will attend lake improvement board meetings, as requested (typically 1 in the spring and 1 in the fall/winter), to assist the Board with administration including recommendations of future lake improvement projects not currently utilized.

Cost Meeting Attendance: No Charge

Additional Project Management/Consulting Time, if required: \$150.00/hr

Optional Management Services

Milfoil Genetic Testing: Over the last decade, advancements in technologies have allowed genetic testing of milfoil stems to determine genetic makeup (i.e. Northern watermilfoil versus Eurasian watermilfoil versus Hybrid watermilfoil). This testing has confirmed that there are variances in the genetic makeup of different hybrid milfoils. Genetically testing milfoil can be helpful if treatments have shown unexpected results. PLM has been collaborating with Universities across the country in sampling and studying the genetic makeup of milfoil infestations across Michigan. Although this data is very helpful in researching milfoil, genetic testing is not a requirement. PLM can genetically sample milfoil upon request or if required for management implementation.

Nutrient Abatement: PLM's healthy lakefront living guide, which includes many measures taken to promote a healthy lake and reduce nutrient loads, can be presented to riparian's and discussed in the annual newsletter to residents. Additionally, PLM is certified to work with the natural shoreline partnership to restore shoreline areas for the protection of the lake and reduction of nutrients entering the lake. Bear Lake can work with PLM to perform a "Score the Shore" to evaluate the lake shoreline and explore opportunities to improve the lake conditions. In addition, nutrient remediation efforts can include nutrient mitigation through the use of Phoslock and/or alum, bacteria augmentation, watershed planning, and tributary testing/improvement to name a few. PLM will work with your group to incorporate the best management practices available for Bear Lake, if so desired.

Contract Period:

Multiple Year Treatment Program: As an incentive to establish a multiple year agreement we will manage your lake at the same price structure as 2023 for 2024! The remaining three years (2025, 2026, 2027) will have cost increases of (5%) five percent per year or less. PLM or the BLLB may terminate this agreement with a 30-day notice as long as the BLLB pays all outstanding invoices for services already rendered

Indemnification

1. PLM agrees to indemnify, hold harmless, and defend the BLLB from and against any and all liabilities, penalties, forfeitures, suits, losses, damages, costs, and expenses (including costs of defense, settlement, and reasonable attorney, consultant, or other professional fees and the reasonable costs of investigation, containment, and cleanup), which the BLLB may incur, become responsible for, or pay out as a result of death or bodily injury to any person (including employees of either party to this contract and the employees of their contractors and subcontractors), destruction or damage to or lost of use of any property, contamination of or adverse effects on the environment, or any violation of government laws, regulations, or orders, to the extent caused by: (a) PLM's breach of any representation, warranty, term, or provision of this contract; (b) The negligence or intentional misconduct of PLM, its employees, agents, or representatives in the performance of this contract; or (c) Poor, improper, incorrect, or unworkmanlike performance of any of the work to be performed under this contract by PLM. However, such indemnification shall not apply to the extent such liabilities solely result from the BLLB's negligence or intentional misconduct, defective materials or work furnished by the BLLB or from a breach of this contract by the BLLB. The indemnity required here shall not be limited by reason of the specification of any particular insurance coverage in this contract or any other agreement of the parties.
2. PLM shall, at a minimum, purchase and maintain such insurance as will protect it and the BLLB from any and all claims which may arise out of or result from PLM's operations under this contract, whether such operations by itself or by anyone directly or indirectly employed by PLM, or by anyone for whom PLM may be liable. By way of example, such claims may include:
 - (a) Claims under workers compensation, disability benefit, and other similar employee benefits acts which are applicable to the work to be performed under this contract.
 - (b) Claims for damages because of bodily injury, occupational sickness or disease, or death of PLM's employees under any applicable employer's liability law.
 - (c) Claims for damages because of bodily injury or death of any person other than PLM's employees.
 - (d) Claims for damages insured by usual personal injury liability coverage which are sustained (i) by any person as a result of an offense directly or indirectly related to the employment of such person by PLM or (ii) by any other person.
 - (e) Claims for damages because of, injury to or destruction of tangible property, including loss of use of that property, and
 - (f) Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

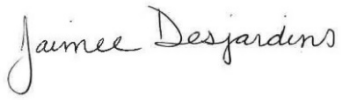
Invoicing and Payments: PLM Lake & Land Management Corp. will submit a detailed invoice following service that will include all the pertinent information. Monies will be due net ninety (90) days after each service. Interest of 1.25% will be added to your bill for each additional sixty (60) days that payment is not received. All invoices are subject to a fuel surcharge of up to 1.5% of the total invoice when gas prices are on average \$3.00/gal (+/- 10%).

Liability Issues: We are responsible for workman's compensation and liability insurance for the duration of the contracted period. PLM will add the BLLB as additionally insured on the liability insurance maintained by PLM.

Please sign, check optional multiple year program, or one-year program, if you would like to participate.

Return one copy of this proposal by February 1, 2023 as our contract.

For further clarification or modifications, please contact.



Jaimee Desjardins, Environmental Scientist
West MI Regional Manager
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cc: Jason Broekstra, Biologist
Vice President of MI Operations
PLM Lake & Land Management Corp
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jasonb@plmcorp.net

For: Bear Lake Lake Board

Please Check Which Program you are participating in

Multiple Year Program _____

One Year Program _____

Print Name

Signature