



PLM

LAKE & LAND
MANAGEMENT CORP

October 6, 2021

Dean Lake Association
Attn: Jonathan Arnold
3909 Keeweenaw Dr. NE
Grand Rapids, MI 49525

PLM Lake & Land Management Corp. will provide a professional aquatic program for the control of weeds and/or algae for Dean Lake for the 2022 season.

Management program for 2022: Aggressively controlling exotic and nuisance native species (if required) throughout Dean Lake utilizing systemic herbicides when appropriate. Management will also include performing algae treatments as required.

Products to be applied: Restrictive products such as Diquat, Renovate 3, ProcellaCOR, Aquathol K, Sculpin, Clipper, Nautique, and nonrestrictive products such as copper sulfate, chelated copper products, shade and any new products approved for use through EGLE.

Current challenges in our economy have significantly impacted the cost of herbicides for 2022. However, through advancements in our technologies, competitive buying power and PLM always working to have the lowest price structures available, we have been able to limit increases to our customers for next season. PLM will continue to work with all manufacturers/distributors directly to ensure your lake is provided the best unit rates available in the industry.

2022 Unit Costs Per Acre:

Contact Herbicides:

Diquat:	\$190.00 (exotics/hybrids)
	\$280.00 (natives)
Aquathol K/Hydrothol 191:	\$200.00 (exotics only)
	\$300.00 (natives)
Clipper 100ppb with contacts:	\$425.00
Clipper 200ppb:	\$650.00
AquaStrike:	\$435.00

Algaecides:

Algae, filamentous	\$55.00
Algae, chara:	\$65.00
SeClear:	\$120.00
SeClear G (SSW control):	\$385.00

Systemic Herbicides:

Renovate (2.5 gal/Acre):	\$300.00
Renovate OTF:	\$490.00
Sculpin G:	\$360.00
ProcellaCOR:	\$115.00/PDU
ProcellaCOR w/contacts:	\$600.00

Technical/Consulting Services:

Cost per AVAS Survey:	\$300.00
Water Quality Program:	\$580.00
EGLE Permit Fee:	\$875.00

Estimated Budget for 2022: \$10,000.00 to \$14,000.00

Note: You will only be charged for the actual amount of control required, at the unit per acre prices listed above. Prior to each treatment and/or services performed by PLM Lake & Land Management Corp. will require prior approval by the Dean Lake Association. This protocol allows the Association to confirm budget/monies are being used efficiently and not exceeding recommendations.

OPTIONAL Phosphorus Mitigation Program (Phoslock):

Chronic algae blooms throughout Dean Lake (particularly Turtle Cove) have been an ongoing issue for many years. In an effort to reduce the need for algae treatments and incorporate an integrated management approach, phosphorus mitigation options should be explored. The use of Phoslock is one option that has proven highly effective in reducing the availability of Phosphorus within a waterbody.

Phoslock is designed to lock 90-95% of suspended phosphorus from the water column to precipitate and bind to the substrate, where it will be inactive and not bioavailable. Along with any suspended phosphorus, once the Phoslock makes its way to the sediment, Phoslock is designed to create a thin layer on the bottom of the lake. This thin layer will lock any phosphorus released from the substrate which can contribute to the algae issues throughout the lake. Cost of Phoslock Program: Contact PLM Rep for Additional Information

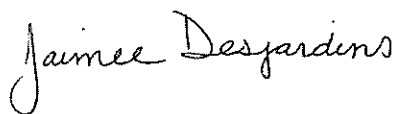
Description of Technical Services:

Water Quality Program: The water quality program consists of two samplings, occurring in the spring and late summer each season. Parameters such as secchi disc, pH, D.O., conductivity, alkalinity and nutrient sampling of nitrates and total phosphorus give us the ability to monitor lake trends more efficiently. This information will enable us to include the trophic status of your lake. Reports are issued annually in the fall. E.coli testing will be done during the summer months, consisting of three samples for an overall lake average. A total of three sites will be sampled for E.coli and results will be included in the annual report if levels are not out of normal range. If results are elevated, immediate contact will be made and actions can be taken at that time.

Surveys: Performing surveys is a vital part of any lake management program. PLM surveys a lake in the spring and fall as well as surveying for pre/post treatments. Lake representatives are welcome to arrange joining PLM for a survey. Depending on the type of survey performed, a cost may apply. An AVAS survey is a more specific survey performed for specific reasons. Performing spring and fall AVAS surveys of the lake will allow for all vegetation within the lake, native and exotic, to be recorded along with density. 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. Surveys will be supplied to the lake association upon completion with a breakdown of what the survey indicates.

I look forward to the challenge of controlling the algae and weed growth in Dean Lake and working with you next summer. Information regarding treatment dates will be mailed in the spring of 2022.

Sincerely,



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