

September 11, 2025

Lyon Lake Improvement Board Attn: Marty LaFayette PO Box 101 Marshall, MI 49068

PLM Lake & Land Management will provide a lake management program for Lyon Lake for the 2026 thru 2030 seasons. The program will (1) control exotic plant species, (2) monitor water quality, and (3) monitor the aquatic plant community.

This proposal is intended to be a continuation of the existing management program that has been in place beginning in 2003. Management has focused primarily on the control of exotic plants species and nuisance algae growth. Eurasian watermilfoil and curlyleaf pondweed have been the primary focus but in recent years, the exotic macro algae starry stonewort has been found in the lake and has required treatment.

This proposal provides for both spot treatments as well as a potential whole lake Sonar A.S. treatment. Historically, Sonar has been needed periodically to "reset" milfoil to low levels. Current milfoil levels are low on Lyon Lake but having it in the proposal will safeguard against any unforeseen milfoil expansions. This treatment may or may not be needed.

#### Management Program 2026 - 20230:

# **Conventional Spot Treatments**

**Products to be applied:** Navigate (granular 2,4-D), Sculpin, Renovate Max G, ProcellaCOR, Renovate, Aquathol K, Hydrothol 191, Diquat, Clipper and non-water restrictive products such as Nautique, Komeen, Copper Sulfate, Cutrine-Plus, Cygnet Plus and shade as a tracer.

**April/May:** Survey of the lake to determine exact areas of Curly Leaf pondweed and Eurasian Watermilfoil growth. Curly Leaf pondweed will be treated with Aquathol K and Hydrothol 191. Areas where Eurasian Watermilfoil is found, will be treated with Navigate (2,4-D), Renovate 3 and/or Reward. \*\* Algae treatments will be performed on an as needed basis.

# Unit Costs Per Acre:

Algaecides: Algaecides (per acre) Algaecides SeClear (per acre)	<u>Cost:</u> \$60.00 \$255.00	Application Rate: @5-6lbs/acre + chelated copper @ 5 gal/ace
Systemic Herbicides:		
2,4-D (Navigate):	\$390.00	@100lbs/acre
2,4-D (Sculpin G):	\$575.00	@120lbs/acre
Renovate OTF:	\$850.00	@120lbs/acre
Renovate 3:	\$495.00	@2.5gals/acre
ProcellaCOR:	\$130.00	@1 pdu
ProcellaCOR + Diquat	\$615.00	@4PDU's and 1gal/acre

#### Contact Herbicides:

Diquat:	\$210.00	@1gal/acre
Diquat:	\$260.00	@2gals/acre
Aquathol K:	\$230.00	@1gal/acre
Aquastrike:	\$350.00	@2.5gals/acre
Flumioxazin:	\$350.00	@200ppb
Flumioxazin:	\$380.00	@100ppb + diquat
Starry stonewort Treatments:		
SeClear G:	\$390.00	@ 1 ppm
Copper sulfate:	\$135.00	@.4 ppm
Other Services:		
Nautique (wild celery):	\$410.00	@7-9gals/acre
Muck Digestion	\$275.00	@25lbs / acre
AVAS Survey (annual):	\$400.00	
Water Quality Program:	\$675.00	
DEQ Permit:	\$875-\$1,000	Per Year

### Management program for using Sonar A.S.

**April/May**: Weed treatment of entire lake, applying restrictive product Sonar A.S. "Fluridone" for the control of exotic plant species.

Cost of Fluridone treatments at 6 ppb: \$7,300.00

A bump up treatment may be required  $^2$ -3 weeks after the initial application. We estimate that 1-4 ppb may be required, The cost will be \$1,250.00 per additional ppb.

**Note:** Additional fees will be required based on DEQ policy when using Fluridone. The DEQ requires: permit fees, fastest (measurements of ppb of Fluridone in the water body through the year, water quality, lake management plans, and surveys.) Cost per fastest: \$150.00 Cost per survey: \$400.00. Cost of Lake Management Plan: \$500.00. Cost of permit fee: \$1,000.00

# Suggested budget for using Fluridone:

Estimated total cost for Sonar treatments:	\$13,675.00	\$18,175.00
Additional requirements by DEQ: ~	\$4,375.00	\$4,375.00
June, July/August: Algae treatment if required:	\$750.00	\$1,500.00
April/May: Fluridone bump up treatment (1-4 ppb):	\$1,250.00	\$5,000.00
April/May: Fluridone treatments 6ppb:	\$7,300.00	\$7,300.00

# Estimated Cost of Management 2026 thru 2030

# Budget 2025 thru 2029:

2026 year: \$12,000.00 2027 year: \$13,000.00 2028 year: \$18,175.00 2029 year: \$10,500.00 2030 year: \$11,500.00

Estimated cost for treatments 2026 thru 2030: \$65,175.00

**Note:** Prior to each treatment and/or services performed by PLM Lake & Land Management Corp will require prior approval by the Lyon Lake Improvement Board. This protocol allows the Lyon Lake Improvement Board to confirm budget/monies are being used efficiently and not exceeding recommendations.

# Water Quality Program:

The water quality program consists of two samples, occurring in the spring, and late summer each season. Parameter such as secchi disc, pH, D.O., conductivity, alkalinity and nutrient sampling of total nitrogen and total phosphorus give us the ability to monitor lake trends more efficiently. This information will enable us to include the tropic status of your lake. The program also tests your water for Fecal bacteria (E. Coli), in mid-summer which can determine the condition of your lake and if the water is safe for swimming. Reports will be issued annually in the fall.

Cost for Water Quality Program: \$675.00

#### Contract Period:

Multiple Year Treatment Program: As an incentive to establish a multiple year agreement we will treat your lake or pond at the same price structure as 2026 for 2027!!! The remaining three years (2028, 2029, 2030) will have cost increases of (3%) three percent per year or less. If total chemical cost increases 10% from the previous year a new agreement will have to be mutually acceptable. If during the life of the contract the DEQ or other regulatory agencies significantly change the approved treatment procedures, either party may terminate this agreement upon giving ninety (90) days advance written notice thereof.

One Year Treatment Program: Pricing is based on the type and the amount of vegetation or algae present at the time of treatment, as well as, the products applied. Unlike the multiple year program, an agreeable price structure is not contracted into a one-year program. Therefore, an increase in the cost of products, labor, or changes made by the DEQ or other regulatory agencies may have a drastic effect on the pricing for following years.

### Permit Fee:

PLM Lake & Land Management is responsible for completing and submitting aquatic nuisance permit applications. PLM Lake & Land Management will send an invoice or statement for the yearly DEQ permit application fee. It is your responsibility to send a check made out to the "State of Michigan" to our office. We must include this check with the DEQ permit application. A non-refundable fee of \$200.00 will be applicable if lake is not treated after obtaining the DEQ permit.

#### Posting of Treatment Areas:

Posting of shoreline treatment areas is the responsibility of PLM Lake & Land Management and will be conducted according to MIDEQ regulations. Signs will be attached to thick barked trees, posts or other suitable fixtures already on site. If homeowners wish to have signs posted in designated areas or on specific fixtures they must notify PLM Lake & Land Management, providing lake address, location of property, and where the signs are to be posted. Pictures are the most informative way to relay this information. Notification of alternate posting must be made at least 14 days prior to treatment and additional fees may apply. The removal of posting signs after the restrictions have expired is the responsibility of the homeowner.

#### Notification of Treatments:

It is your responsibility to notify each resident within 100 feet of the treatment area at least seven days in advance, but no more than forty-five days prior to the first treatment date that products will be applied to the lake. This notification requirement must be administered to each and every property owner within 100 feet of any treatment area. PLM Lake & Land Management will provide a tentative treatment schedule and the **Notice** of proposed products to be used during the spring of each year. We will also notify resident within 100 feet of the treatment areas on the day of treatment.

# Non-Target Species:

Please be aware that we only control weeds and algae **present** at time of treatment. Emergent vegetation (cattails, bulrush, purple loosestrife), lily pads, eel grass and sago pondweed require separate programs for control and are not addressed unless specifically mentioned in the management program. We have no control over future weed or algae growth based on the current chemicals registered for aquatic use in Michigan.

### Invoicing and Payments:

PLM Lake & Land Management will submit an invoice following treatment that will include the following information; lake and/or pond(s) treated, date of treatment and type of treatment or acres treated. Monies will be due net fifteen (15) days after each treatment. Interest of 1.25% will be added to your bill for each additional sixty (60) days that payment is not received.

#### Liability Issues:

We are responsible for workman's compensation and liability insurance for the duration of the contracted period. PLM Lake & Land Management is not responsible for fish loss due to low oxygen levels caused during warm water conditions.

Please sign, check multiple or one year program and return one copy of this proposal as our contract. For further clarification or modifications please contact.

Andy Tomaszewski, Ecologist Regional Manager PLM Lake & Land Management Corp

For Lyon Lake

Multiple-Year Program \_\_\_\_\_

One-Year Program

Print Name

Dat

Signature