



November 14, 2016

Indian Lake Property Owners Association  
 PO Box 63  
 Howard City, MI 49329

Thank you allowing me to submit a proposal to work with you and your Association on Indian Lake. I am sure that you will find this proposal extremely competitive and to include all the services you may be interested in using. As you review this proposal, please feel free to contact me with questions. It does include a proposed budget based on possible treatments required throughout the 2017 season. PLM will work within your available budget to provide Indian Lake with the best service and management possible.

Over the lake decade, PLM has utilized many different management tools in controlling the exotic species, EWM throughout Indian Lake. Along with the target program of EWM, PLM has worked to control Algae, Nuisance Native Plants, performed aggressive survey techniques and water quality monitoring. Over this time period, we've been able to explore what methods work the most effectively in controlling the EWM in Indian Lake. EWM that has been tested and determined to be a hybrid strand that has shown some resistance to standard treatment protocols. In 2013, the EWM was targeted lake wide and this treatment has held control throughout the 2016 season. In 2016, the EWM has slowly started to rebound but is currently at much lower levels than previously found on Indian Lake. It is recommended to continue to monitor the growth and combat the EWM based on the density and distribution found. As Sonar wasn't the most effective long term means, and triclopyr was, it may be most effective to use triclopyr on a large scale moving forward. In addition, algae and native plants have always been a problem in Indian Lake and these management programs need to continue. In 2016, both native pondweeds and Wild Celery were a concern in the lake and should be managed to reduce interference with recreational use or also for promoting a healthy fishery. Not all native plants respond to herbicides the same and permit conditions stipulates treatment as well. However, control can and should be included in the treatment program when required.

**Management program goals for 2017:** Aggressively controlling exotic and invasive species throughout Indian Lake utilizing systemic herbicides when appropriate. Treating for algae growth and native plant control as required while maintaining a healthy plant ecosystem for the overall health of the lake and the fishery. Management will also include performing surveys (AVAS Surveys when required), pre/post treatment surveys, and water quality analysis (optional). Please note that board members can accompany PLM in the field for surveys if pre-arranged.

**Products to be applied:** Restrictive products such as Diquat, Triclopyr, Aquathol K, Hydrothol 191, 2,4-D and nonrestrictive products such as copper sulfate, chelated copper products, shade and any new products approved for use through the MDEQ.

**Proposed Timeline**

**January 2017:** Apply for DEQ Permit

**Spring 2017:** PLM notifies all residents via mailing of proposed treatment schedule. Addresses supplied by board

**May/June:** Spring Survey to determine initial treatment locations, Water Quality optional

**May/June:** Initial herbicide application

**June/July:** Follow up surveys (pre/post surveys), Follow up herbicide application, WQ testing optional

**August/September:** Potential herbicide application. Fall AVAS survey, Water Quality optional

**Fall 2017:** Year End Review of program

**Note:** PLM schedules every 3 to 4 weeks for pre/post surveys and applications and performs services only based on approval and set management programs.

**Unit Costs Per Acre:**

<b>Systemic Herbicides:</b>	<b>Cost:</b>	<b>Application Rate:</b>
2,4-D (Navigate):	\$380.00	@100lbs/acre

PO Box 424 · Ewart, Michigan 49631  
 phone 800.382.4434 · fax 231.372.5900  
[www.plmcorp.net](http://www.plmcorp.net)

2,4-D (Sculpin G):	\$360.00	@120lbs/acre
Renovate OTF:	\$460.00	@120lbs/acre
Renovate 3:	\$255.00	@2.5gals/acre

**Contact Herbicides:**

Diquat:	\$175.00	@1gal/acre
Diquat:	\$200.00	@2gals/acre
Aquathol K:	\$180.00	@1gal/acre
Clipper:	\$750.00	@200ppb
Clipper:	\$450.00	@100ppb + diquat

**Other Services:**

Nautique (wild celery):	\$365.00	@7-9gals/acre
Komeen Crystals:	\$515.00	@ 30#/acre
Algaecides (per acre)	\$42.00	@5-6lbs/acre + chelated copper
Starry Stonewort (per acre)	\$82.00	(hydrothol + max rate Copper Sulfate)
Starry Stonewort (per acre)	\$55.00	(max rate Copper Sulfate)
AVAS Survey:	\$565.00	Optional
Bathymetric Map:	\$1250.00	Optional
Mid-Summer Surveys:	No Charge	
Water Quality Program:	\$630.00	Optional
Mechanical Harvesting	\$250/hour	(\$4,000.00 minimum)
DEQ Permit:	\$1,500.00	**

**Estimated Budget for 2017:** PLM bills per acre pending product dosage using the unit costs listed above. You will only ever be billed for the services and treatments rendered post application. Treatments will vary from year to year as well and that is accounted for in management programs such as the proposal here. PLM will prepare treatment maps and recommendations while working within the established budget to the best of our ability. Please note at no time will all plant biomass be removed.

	Minimum	Maximum
Permit:	\$ 1,500.00	\$ 1,500.00
Algae Control:	\$ 5,000.00	\$ 6,000.00
Weed Control (Exotics):	\$12,000.00	\$16,000.00
Weed Control (Natives):	\$ 8,000.00	\$12,500.00
Management Services:		
WQ Program:	\$ 630.00	\$ 630.00
AVAS Surveys:	\$ 1,130.00	\$ 1,130.00
<b>Total:</b>	<b>\$28,260.00</b>	<b>\$37,760.00</b>

**Available Management 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 total nitrogen 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 ecoli 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. Cost of WQ Program: \$630.00

**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. AVAS surveys are also a requirement from the MDEQ prior to a Sonar treatment. Surveys will be supplied to the lake board upon completion

with a break down of what the survey indicates. Cost per AVAS Survey: \$565.00

**Meeting Attendance/Presentation:** A representative of PLM is available to attend lake association/board meetings upon request. This request has to be made prior to meeting to allow for conflict in representatives schedule. If conflict in meeting time does arise, alternative dates and times need to be determined between representative and board. Residential concerns can always be brought to the lake association/board and then to PLM or directly to PLM by calling our office. Representation is typically made at a spring and fall board meeting as well as a possible summer lake association meeting.

#### **Contract Period:**

**Multiple Year Treatment Program:** As an incentive to establish a multiple year agreement we will treat your lake at the same price structure as 2017 for 2018!! The remaining three years (2019, 2020, 2021) 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 MDEQ 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 MDEQ or other regulatory agencies may have a drastic effect on the pricing for following years.

**Permit Fee:** PLM Lake & Land Management Corp. is responsible for completing and submitting aquatic nuisance permit applications. PLM Lake & Land Management Corp. will send an invoice or statement for the yearly MDEQ 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 MDEQ permit application. All applications will be made under the approved permit and in accordance with State and Federal regulations/laws and applied with the product labels.

**Posting of Treatment Areas:** Posting of shoreline treatment areas is the responsibility of PLM Lake & Land Management Corp. and will be conducted according to MDEQ 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 Corp., 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. PLM will not treat and or post restrictions on the lake that would run over a weekend or holiday.

**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, of the products that may be applied to the lake. PLM can assist with this notification and/or send it out for you (if provided an updated address list) and a postage and/or surcharge may apply. This notification requirement must be administered to each and every property owner within 100 feet of any treatment area. PLM Lake & Land Management Corp. 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 residents within 100 feet of the treatment areas on the day of treatment with posting signs.

**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 Corp. 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 forty-five (45) 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. All invoices may be subject to a fuel surcharge of up to 1.5% of the total invoice. If changes, amendments or modifications need to be made to these payment terms, please contact PLM to discuss.

**Liability Issues:**

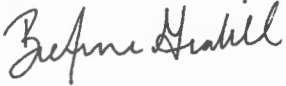
We are responsible for workman's compensation and liability insurance for the duration of the contracted period.

PLM Lake & Land Management Corp. is not responsible for fish loss due to low oxygen levels caused during warm water conditions.

Please sign, check optional mutli year program, or one year program and water quality programs, if you would like to participate.

Return one copy of this proposal by December 15, 2016.

For further clarification or modifications please contact.



BreAnne Grabill, Environmental Scientist  
Northern Lakes Manager  
PLM Lake & Land Management Corp.

**For Indian Lake**

Please Check which Program you are participating in

**Multiple Year Program** \_\_\_\_\_

**One Year Program** \_\_\_\_\_

**Please check optional services you are participating in**

**Water Quality Program** \_\_\_\_\_

**1 or 2 AVAS Surveys per year** \_\_\_\_\_

Lake Representative to contact:

\_\_\_\_\_

Name

\_\_\_\_\_

Address

\_\_\_\_\_

Home Phone / Cell Phone

\_\_\_\_\_

Email Address

\_\_\_\_\_

Print Name

\_\_\_\_\_

Signature

Date