



September 23, 2020

Twin Lakes Property Owners Association
 P.O. Box 807
 Lewiston, MI 49756

Thank you choosing to work with PLM this summer on beautiful West and East Twin Lakes. The following update is provided as part of our current program contract for the 2021 season.

Management program goals for 2021: Aggressively controlling exotic and invasive species throughout Twin Lakes utilizing systemic herbicides when appropriate. At this time, treating for algae growth and native plant control is not included as part of the program. In the future, if these control measures are required, the program can be expanded. Please note that whenever expanding a program, an IPM approach will be used to properly manage the entire lake ecosystem. 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, ProcellaCOR and nonrestrictive products such as copper sulfate, chelated copper products, shade and any new products approved for use through the MDEQ.

Proposed Timeline

Winter 2020/2021: Apply for DEQ Permit

Spring 2021: Notification to all residents via mailing of proposed treatment schedule.

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 2021: 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

Systemic Herbicides:	Cost:	Application Rate*:
2,4-D (Navigate):	\$655.00	@150lbs/acre
2,4-D (Sculpin G):	\$435.00	@160lbs/acre
Renovate OTF:	\$620.00	@160lbs/acre
Renovate 3:	\$305.00	@3gals/acre
Contact Herbicides:		
Diquat:	\$180.00	@1gal/acre
Diquat:	\$200.00	@2gals/acre
Clipper:	\$500.00	@200ppb/acre
Clipper/Diquat:	\$375.00	@100ppb,1gal/acre
Other Services:		
Seasonal survey program:	\$5000.00	Optional
Water Quality Program:	\$625.00	Optional (per sampling location)

DEQ Permit: \$400.00-\$800.00 **

If and when other exotic plants and/or services are required, additional unit costs will be supplied for the board. As the current concern is with EWM, the above costs are focused on that infestation.

*Application rates are provided with a base of 150 or 160lbs/acre. For small spot treatments on larger lakes, this should be the base application rate used. In many situations, application rates may need to increase based on water depth, water dilution, size of bed, type of milfoil (hybrid), treatment history, etc. Rates can range from 160lbs/acre to 200lbs/acre or even 240lbs/acre plus. Final application rates will be determined prior to treatment.

** 2021 Permit Fees have not been released from the DEQ at this time. The DEQ has stated they will be released on the 1st of November. At this time, the permit fee is estimated to fall with the \$400-\$800.00 range but this could vary up or down pending the new permit fee structure.

Estimated Budget for 2021: 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. This budget includes the treatment of EWM in West Twin Lake, which has a current infestation of approximately 5-12 acres. In order to stay in front of the infestation, the budget includes follow up treatment, high dosage application rates of 160lbs-200lbs/acre and treatment acre expansion, which could occur prior the Spring 2021 treatment. Further, it is often found that a few years after the initial treatment, some re-occurrence in original beds is found (from developed root system). Therefore, acreages may range and are accounted for in the maximum estimated budget. Please also note, with waterbodies the size of West and East Twin Lake, expansion of the EWM is very likely and treatment costs will likely increase if additional areas become infested.

	Minimum	Expected	Maximum	
Permit:	\$ 400.00	\$ 400.00	\$ 400.00	
<u>EWM Control:</u>	<u>\$ 5,000.00</u>	<u>\$ 6,950.00</u>	<u>\$ 8,625.00</u>	
<i>Subtotal:</i>	<i>\$ 5,400.00</i>	<i>\$ 7,350.00</i>	<i>\$ 9,025.00</i>	
Management Services:				
WQ Program:	\$ 000.00	\$ 000.00	\$ 625.00	(optional)
<u>AVAS Surveys:</u>	<u>\$ 5,000.00</u>	<u>\$ 5,000.00</u>	<u>\$ 5,000.00</u>	(optional)
Total:	\$10,400.00	\$12,350.00	\$14,650.00	

PLM recommends using a variety of active ingredients to prevent any resistance issues. Systemic herbicides attack the root system and can provide the ability to control the EWM plants longer. The use of systemic herbicides should be incorporated into the management plan on Twin Lakes. Further, alternating active ingredients can protect your lake and management program long term.

It is highly recommended to continue your survey program for 2021.

Please watch for information regarding the 2021 permit fee later this fall and 2021 service schedule next spring.

For further clarification or modifications please contact.

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