



PLM
LAKE & LAND
MANAGEMENT CORP

October 7, 2022

LMPOA
Mr. Dennis Bryant
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Thank you for choosing to work with PLM on Miramichi Lake. The following update is provided a part of our current program for your lakes for the 2023 season.

Current challenges in our economy have significantly impacted the cost of herbicides for 2023. 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. Also, despite these unit costs increases, the overall budget for the 2023 season has not increased from the 2022 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.

Management program for 2023: The main focus of aquatic plant management should be in controlling exotic and/or invasive plants. Eurasian watermilfoil was found growing in Lake Miramichi, in addition to Curlyleaf pondweed. Exotic species control should be the main focus of the management program and this should be done with chemical herbicides. The second goal of aquatic plant management is dealing with nuisance native plants and algae, if needed and desired by the residents. All residents need to remember the goals of lake management and realize that it is not realistic to live on a healthy lake that has no plants. Lakes need plants to properly function; however, residents do not need to be bombarded with plants aka “weeds”. If native plants become a nuisance they can be targeted for control. The end of summer surveys found some plants were growing at nuisance levels. Based on the survey on Lake Miramichi, native plant management needs to be part of the management program. Management can 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.

Lake Miramichi Recommendations:

- Herbicide treatment of exotic plants beds; utilizing a combination of systemic herbicides when available. Using various active ingredients and possibly increased dosage rates will help insure a thorough kill of the milfoil plants and help prevent hybrid resistance.
- Spot treatment of developed shoreline for navigational and high density native plant issues. Native plants can only be temporally controlled. Contact herbicides will not kill the root system. Although regular treatments will weaken the plants; all biomass will not be removed and annual treatments will have to be performed.
- Algae treatments as required.
- Regular pre/post treatment surveys. One or two AVAS surveys per season. Water quality testing.

Products to be applied: Restrictive products such as Diquat, ProcellaCOR, Renovate, Aquathol K, Hydrothol 191, 2,4-D, Komeen, Nautique, Clipper and nonrestrictive products such as copper sulfate, chelated copper products, shade and any new and additional products approved for use through the MEGLE.

Annual Proposed Timeline

Winter: Apply for EGLE Permit

Spring: PLM notifies all residents via mailing of proposed treatment schedule or Association newsletter includes notice. Addresses supplied by board

May/June: Spring Survey, Water Quality optional

May/June: Potential initial herbicide/algaecide application

June/July: Potential herbicide/algaecide application. Harvesting. Pre/post survey, WQ testing optional

August/September: Potential herbicide/algaecide application. Fall AVAS survey, WQ optional

Fall: Year End Review of program supplied to Board.

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. Continually monitoring Lake Miramichi will allow for the most effective management program.

Unit Costs Per Acre

Systemic Herbicides:

Renovate OTF:	\$500.00 @120#/acre
Renovate 3:	\$280.00 @2.5gal/acre
Sculpin G:	\$380.00 @120#/acre
ProcellaCOR:	\$100.00 @1PDU

Contact Herbicides:

Diquat:	\$170.00 @1gal/acre
Diquat:	\$185.00 @2gals/acre
Aquathol K:	\$180.00 @1gal/acre
Clipper:	\$400.00 @200ppb
AquaStrike:	\$335.00 @2.5gals/acre

Other Services:

Nautique (wild celery)	\$385.00
Algaecides (per acre)	\$42.00 (filamentous or planktonic)
Algaecides (per acre)	\$47.00 (chara)
Copper Max/Hydro	\$106.00 (Starry stonewort)
AVAS Survey:	\$445.00/survey
Mid-Summer Surveys:	No Charge
Water Quality Program:	\$655.00/sampling location
EGLE Permit:	\$1500.00, \$400.00

Proposed Spot Treatment Budget for 2023:

In the past, Lake Miramichi was treated lake wide using Sonar, which successfully reduced the milfoil biomass in following years. This treatment held well in 2021 and 2022 and very little EWM was found. It is expected that more EWM will be required for treatment in 2023 than in 2022. All budgets are proposed and optional based on approved programs. Proposed budgets are provided to show options in a management program and final budget allocations should be given to PLM prior to initiating a treatment program. All budgets are comprised using the unit costs per acre listed above and approximate acreages. The below budget is determined using estimated acreages to determine possible treatment acreages and broken into categories to show possible breakdown of the specific expenditures of a season. All treatment costs will stay within approved funds. The following gives an approximation of an expected budget for Lake Miramichi. Treatments will only be performed as required and approved and the is not a final cost.


In 2022, it was recommended to consider targeting Wild Celery or Eel Grass for control. This was not approved, but as this plant continues to become more of an aesthetic issue, control options are available. Wild Celery is best controlled early, in late July and July, to suppress growth for as much of the growing season as possible. Although Wild Celery cannot be completely removed from the water quality, suppressing it's growth can greatly reduce the navigation and recreational nuisance caused by this plant. If and when the association would like to consider including management of this plant, it can be incorporated into the program. Wild Celery can be treated up to two times per season and a rough estimate of cost (not included below is ~ 20 acres ~\$9,500.00).

Please note that in 2021 and 2022, expenses came in well below the expected budget!

Chemical Program:	est.-Low	Expected	est.-High
Permit:	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00
Exotic Plant Control:	\$11,990.00	\$15,960.00	\$17,460.00
Algae Control:	\$ 2,000.00	\$ 2,700.00	\$ 5,000.00
Native Plant Control:	\$10,000.00	\$ 12,000.00	\$14,000.00
<i>Subtotal:</i>	\$25,900.00	\$32,600.00	\$38,400.00
Management of lake			
Survey Program	\$ 445.00	\$ 445.00	\$ 455.00
Water Quality Program	\$ 000.00	\$ 1,310.00	\$ 1,310.00
<i>Subtotal:</i>	\$ 445.00	\$ 1,755.00	\$ 1,755.00
Total:	\$26,325.00	\$34,275.00	\$40,075.00

Please watch for updated treatment information next spring.

For further clarification or modifications please contact.



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