



PLM Lake & Land Management Corp.

Northern Division

P.O. BOX 424 Evart, MI 49631
800-382-4434 ext. 2200 (o) 231-372-5900(f)
www.plmcorp.net

On-Site Lake Evaluation Record

Lake Name: Six Mile Lake

County: Antrim/Charlevoix

Evaluated by: Casey Shoaff

Reviewed by: Bre Grabill

Date: 8 September 2016

Purpose of evaluation: End of season survey

Evaluations Performed

Aquatic Vegetation Evaluation

- ☒ Aquatic vegetation survey
- ☐ Aquatic vegetation brief check

Vegetation evaluation methods

- ☒ Visual evaluation
- ☒ Sample collection with rake
- ☐ Sonar profiling
- ☐ GPS-mapped sample locations

x Water quality sampling

- ☒ On-site (Temperature, DO, Secchi disk)
- ☒ Water samples collected for
_____TP, TN, ALK_____ analysis

☐ GPS data collection

- ☐ Depth survey
- ☐ Shoreline mapping
- ☐ Reference point location

☐ Other _____

Overall Condition of Lake

- ☐ excellent (no problems or developing problems noted)
- ☒ very good (Continue Current Program)
- ☐ fair (management required soon)
- ☐ poor (management needed as soon as possible)
- ☐ very poor (management action past due—IMMEDIATE response required)

Problems Noted

- ☒ Growth of exotic plants (mark locations on map)
 - ☒ Eurasian watermilfoil
 - ☐ curlyleaf pondweed
 - ☒ other ___Variable leaf milfoil_____
- ☒ Excessive growth of native plants (note plant species and mark locations on map)
- ☐ Excessive filamentous algae growth (mark location on map)
- ☐ Poor water clarity
- ☐ Blue-green algal blooms



PLM Lake & Land Management Corp.

Northern Division

P.O. BOX 424 Evart, MI 49631
800-382-4434 ext. 2200 (o) 231-372-5900(f)
www.plmcorp.net

RECOMMENDATIONS

- X Monitoring Program:
Continue monitoring program next season: ☒ Yes, ☐ No
- X Herbicide application: Continue Program Next Season
Need for herbicide treatments next season: ☐ urgent, ☒ serious, ☐ moderate, ☐ slight
- X Algaecide application: Continue Program Next Season
Need for algae treatments next season: ☐ urgent, ☐ serious, ☒ moderate, ☐ slight

NOTES

Six Mile Lake was surveyed on 8 September 2016. Water quality samples were collected at this time as well. The 2016 water quality report is issued with the spring results on a separate report.

Six Mile Lake was surveyed multiple times throughout the season to monitor and track exotic plants as well as native growth in the lake. In 2016, in addition to treatments for milfoil species, treatments for algae occurred as required. Algae growth will vary seasonally and is impacted daily with weather and available nutrients.

Filamentous algae is permitted to be treated in developed shoreline areas of the lake. Algae may need to be treated in 2017 and is only recommended for treatment when it is causing a recreational, navigational or aesthetic issue on the lake.

Eurasian watermilfoil and variable leaf milfoil were targeted for control on 6/20 and again on 8/8. Since the initial treatment, very little milfoil has been found growing. As the milfoil continues to resurge and become more evident in the water column, treatment recommendations may change; however, based on the current growth found, the treatment program has been very effective. It is recommended to continue to survey and spot treat for milfoil as found in the lake. Based on the size of the treatment beds, depth, hybrid species, etc; treatment rates have increased over the last few years and may increase again in the future. New research is showing that hybrid milfoil requires a higher application rate than its parent biotype, Eurasian watermilfoil. Currently, all treatments have fallen within and below budget and the 2017 proposed budget should be sufficient based on previous growth.

Native plants were present in the lake and by mid to late season, some plants are causing a nuisance in certain areas of the lake. Having a diverse and dense native plant community post milfoil treatment supports the selectivity and success of the treatments performed. Residents are encouraged to rake their beaches and remove debris and floating boat chop. If and when native plants become an issue requiring additional control, management options can be worked into the treatment program.

It is recommended to continue to monitor Six Mile Lake with both surveys and water quality monitoring in 2017. Management focus should remain on exotic submersed plants and if approved in the future, terrestrial plants. Additional treatment for algae and/or other concerns can again be incorporated into the program if required and approved throughout the season.

Again, as a reminder your current SAD will expire next year along with your contract. We would be happy to help with the renewal process.

Please contact me with questions or concerns.

BreAnne Grabill, Environmental Scientist
Northern Lakes Manager
PLM Lake & Land Management Corp. North
breg@plmcorp.net