



On-Site Lake Evaluation Record

Lake Name: Six Mile Lake

County: Antrim/Charlevoix

Evaluated by: Dusty Grabill

Reviewed by: Bre Grabill

Date: 22 July 2014

Purpose of evaluation: Mid 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

- Water quality sampling
 - On-site (Temperature, DO, Secchi disk)
 - Water samples collected for _____ 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 (no immediate action required)
- 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



RECOMMENDATIONS

- X Herbicide application (mark locations on map)
Need for herbicide treatments is: urgent, serious, moderate, slight
- Algaecide application (mark locations on map)
Need for algae treatments is: urgent, serious, moderate, slight

NOTES

Six Mile Lake was surveyed on 22 July 2014. Numerous native plants were found during the survey. Milfoil- both Eurasian watermilfoil and Variable leaf milfoil, were found growing in Six Mile Lake. The infestation level is much below previous years and the success of the 2013 season is still being seen with the very slow resurgence of the milfoil in the lake.

The EWM is the target of the management program. A majority of the proposed treatment beds have both milfoil species present and as VLM can be extremely aggressive, this treatment will allow control over both of these species.

There are a handful of .25 to 1 acre patches of milfoil proposed for treatment at 200lbs/acre. The higher application rate will ensure a thorough kill and take into account flow and water disturbance. A few larger beds (narrow strips along shoreline areas) are proposed for control using a rate of 160lbs/acre. The total proposed treatment area is 17.75 acres.

Renovate OTF @ 160lbs/acre (\$575/acre) x 13 acres = \$7475.00
Renovate OTF @ 200lbs/acre (\$718.75/acre) x 4.75 acres = \$3414.06
Estimated treatment cost: \$10,889.06

I propose the applicator to be prepared to treat a few additional acres of milfoil is required ~\$1150.00 if needed.

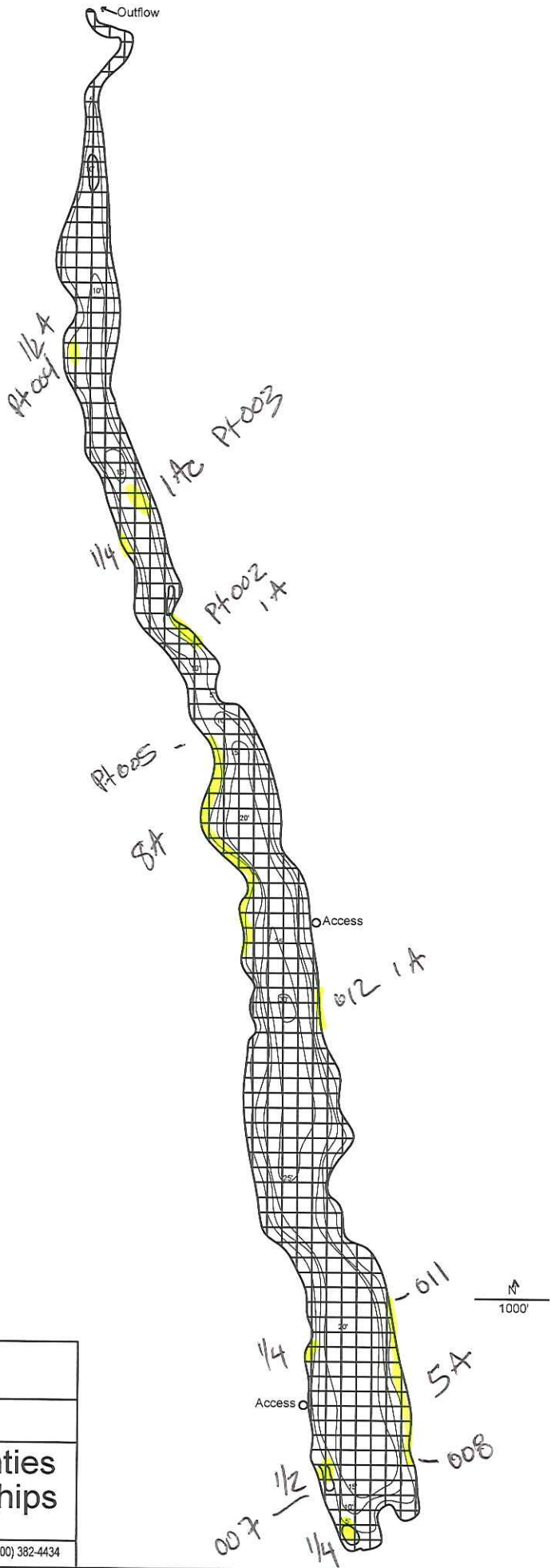
Total expenses to date: including previous treatment and permit: \$7,524.73
Additional expenses for season not invoiced for yet: WQ Program \$600.00, AVAS Survey \$1,000.00
Total combined cost for 2014 thus far, with proposed treatment and known additional expenses for season:
\$21,163.79
Estimated budget for 2014 season : \$45,000.00

I've penciled in this treatment for Monday July 28, 2014.

Please contact me with questions or concerns.

BreAnne Grabill, Environmental Scientist
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7-22-14



Six Mile Lake
407 Acres
Antrim/Charlevoix Counties Echo/South Arm Townships Sec: 5,6,8;19,30,31
Professional Lake Management, P.O. Box 132, Caledonia, MI 49316 Phone (800) 382-4434