



9353 Hill Road • Swartz Creek, MI 48473
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www.lakeproinc.com

Van Etten Lake, Iosco County

September 4th, 2019

2019 Lake Management Report

2019 was the fourth year of the current Special Assessment District (SAD) for Van Etten Lake. Oscoda Township retained LakePro as the lake manager. Our lake management strategy was a continuation of our overall plan for the lake. The main goals were:

1. Locate and aggressively treat any Eurasian Milfoil
2. Locate and treat any other invasive species, such as Curly-Leaf Pondweed
3. Promote native plant growth, while keeping it below nuisance levels

In the spring, LakePro solicited bids for the herbicide treatments and PLM Lake & Land Management was awarded the contract for the third year in a row. The award was based on pricing, application technology, and customer service.

The following is a summary of lake management activities that took place in 2019:

April 26 Van Etten Lake – Weed Committee Pre-Season Meeting

Peter Filpansick, LakePro attended the VELA – Weed Committee meeting to discuss the lake management strategy for the summer.

June 17 Lake Vegetation Survey #1

LakePro surveyed the aquatic plants in the lake. During this survey we did not find any Eurasian Milfoil. We found algae and native plants at sparse levels in a few shoreline areas of the lake. Based on the results of this survey, LakePro scheduled another survey before recommending any treatments because we did not find invasive or nuisance plants.

Herbicide Treatment #1

PLM applied herbicides in the Northwest Bay and in front of the homes on Loud Island. We planned an early treatment for these areas because the aquatic plants normally grow worse in these areas before the rest of the lake. These areas were recommended for treatment and approved by the Weed Committee and Oscoda Township.



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July 9

Lake Vegetation Survey #2

LakePro surveyed the aquatic plants in the lake. Our first objective was to check the previous treatment areas, and the treatment was very successful as controlling the native plants and suppressing algae. We also looked for any invasive species and did not find any in the lake. We then noted all the areas with native plants and algae growing to nuisance conditions. Based on the results of this survey, we designed a custom treatment plan for review and approval.

July 29

Herbicide Treatment #2

PLM was on the lake to treat shoreline areas for algae and native plants. The treatment included 38.0 acres with contact herbicides and algicides. The total cost of the treatment was \$19,000.00. LakePro was also on the lake to ensure the treatment took place according to the plan and the notification signs were posted correctly.



August 19

Lake Vegetation Survey #3

LakePro surveyed the aquatic plants in the lake. Our first objective was to check the previous treatment areas, and the treatment was very successful as controlling the native plants and suppressing algae. We also looked for any invasive species and did not find any in the lake.

Finally, we looked for any additional areas of nuisance native plant growth. At the time of this survey, there were very few plants in the lake all together. There was some regrowth of native plants in the Northwest Bay, but they were not inhibiting navigation, so we did not recommend a treatment.

At the time of the survey, there was also moderate amounts of cyanobacteria in the lake. Depending on the area of the lake, the concentrations varied, but were not as dense as last summer. LakePro collected a water sample and identified *Anabaena* as the dominant species, the same species that was identified in 2018.





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Summary

In 2019, we enjoyed another year without invasive species in the lake. This allowed LakePro and PLM to focus on the nuisance native plants. Similar to previous years, we scheduled an early treatment for the Northwest Bay and Loud Island Cove, because these shallow areas grow worse before most other areas of the lake.

While on the lake to supervise that early treatment, LakePro also surveyed the entire lake to look for invasive species and native plants growing to nuisance levels. We did not find either, so we scheduled another survey before recommending any treatments.

During the second survey, we did not find any invasive plants, so we marked the areas of nuisance algae and native plants for treatment. With approval, PLM came out and treated 38 acres, much less than in previous years.

After the second treatment, LakePro conducted another lake vegetation survey. The shoreline treatment was very successful by controlling the macroalgae and pondweeds. But at the time of this survey, the lake had sparse to moderate cyanobacteria throughout most of the lake. LakePro identified the bacteria as *Anabaena*.

After a large treatment, the algae and plant cells decompose and release nutrients back into the water. The abundant available nutrients can fuel an algal bloom. Furthermore, the lake is constantly receiving additional nutrients from its watershed through the main inlets. Finally, *Anabaena* grows specialized cells that can fix nitrogen to help it grow faster. It was likely a combination of these factors that allowed the cyanobacteria to grow after treating for the green algae and native pondweeds.

The 2019 lake management was successful. We met the primary goals of eradicating Eurasian Milfoil, watching for other invasive species, and suppressing nuisance plants. The only challenge that was unresolved was the cyanobacteria bloom, which is extremely difficult to control after it occurs. For 2020, we plan to ask contractors to bid on products that include "water quality enhancers" to bind phosphorus in the water column and may prevent the late-season cyanobacteria bloom entirely.

The aquatic plant management on Van Etten Lake is progressing efficiently, but is not complete. Continuing your efforts is vital to keeping the lake in the great condition we saw this summer. We must diligently search for new introductions of invasive species such as Eurasian Milfoil, Phragmites, or Fanwort. Also, keeping native plants below nuisance levels will make boating, swimming, and fishing better for everyone on the lake.

Thanks for another great summer on your lake,

Peter Filpansick
Director of Lake Management
Aquatic Biologist

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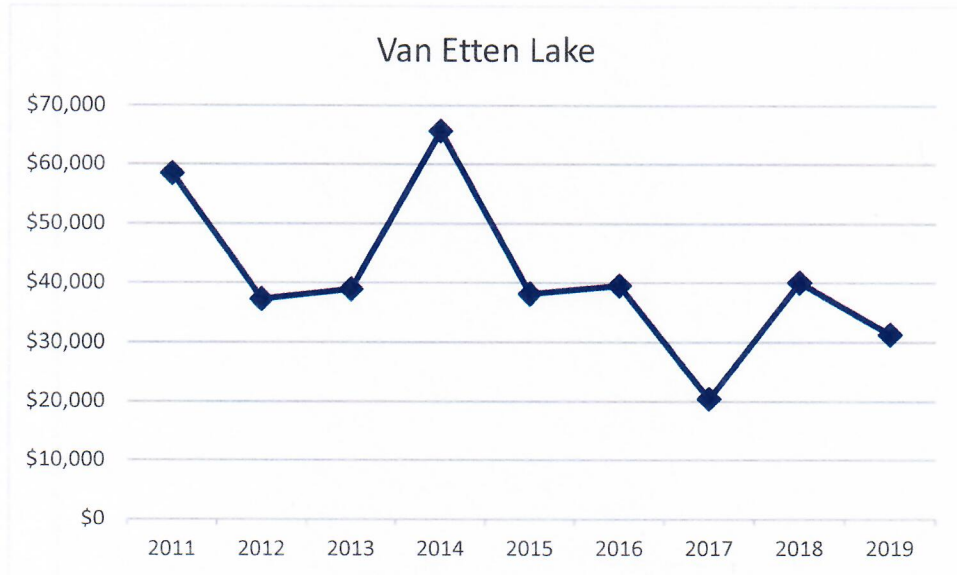
2019 Lake Management Expenditures

LakePro, Inc.	Lake Management Consulting	\$ 8,000.00
MDEQ	Aquatic Nuisance Control Permit	\$ 1,500.00
PLM Lake & Land	Treatment #1	\$ 2,815.00
PLM Lake & Land	Treatment #2	\$19,000.00

2019 Lake Management Total: \$31,315.00

Historical Lake Management Expenditures

2019	\$31,315.00
2018	\$40,030.00
2017	\$20,404.00
2016	\$39,510.00
2015	\$38,120.00
2014	\$65,601.92
2013	\$38,897.50
2012	\$37,254.50
2011	\$58,475.25



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