

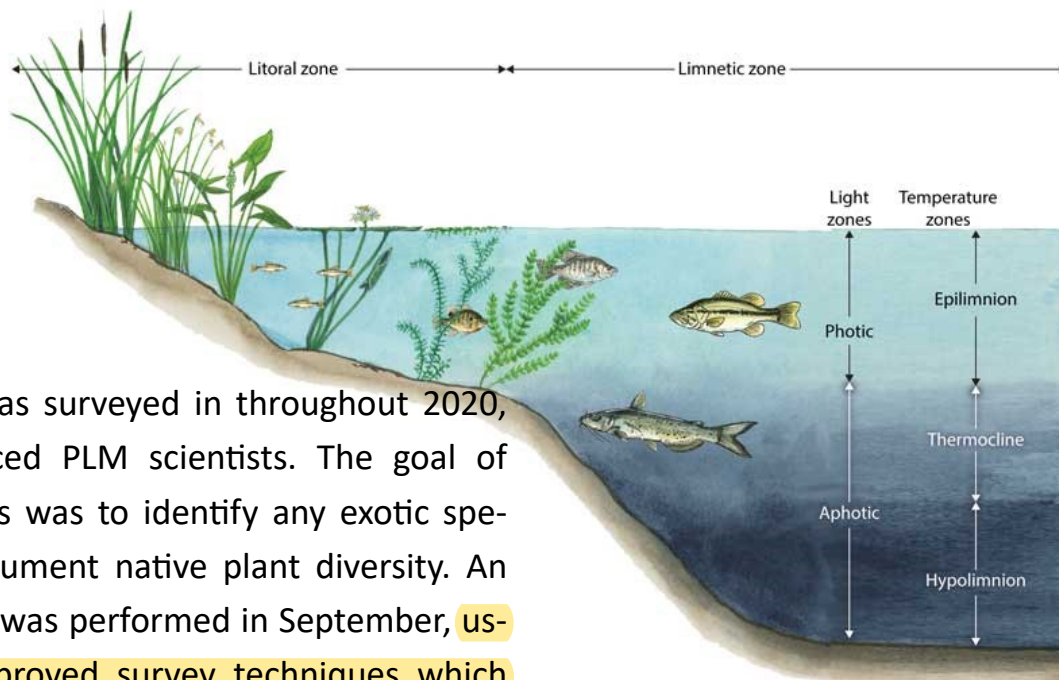


# Lake Evaluation Summary

**Lake Name:** Duck Lake

**County:** Grand Traverse

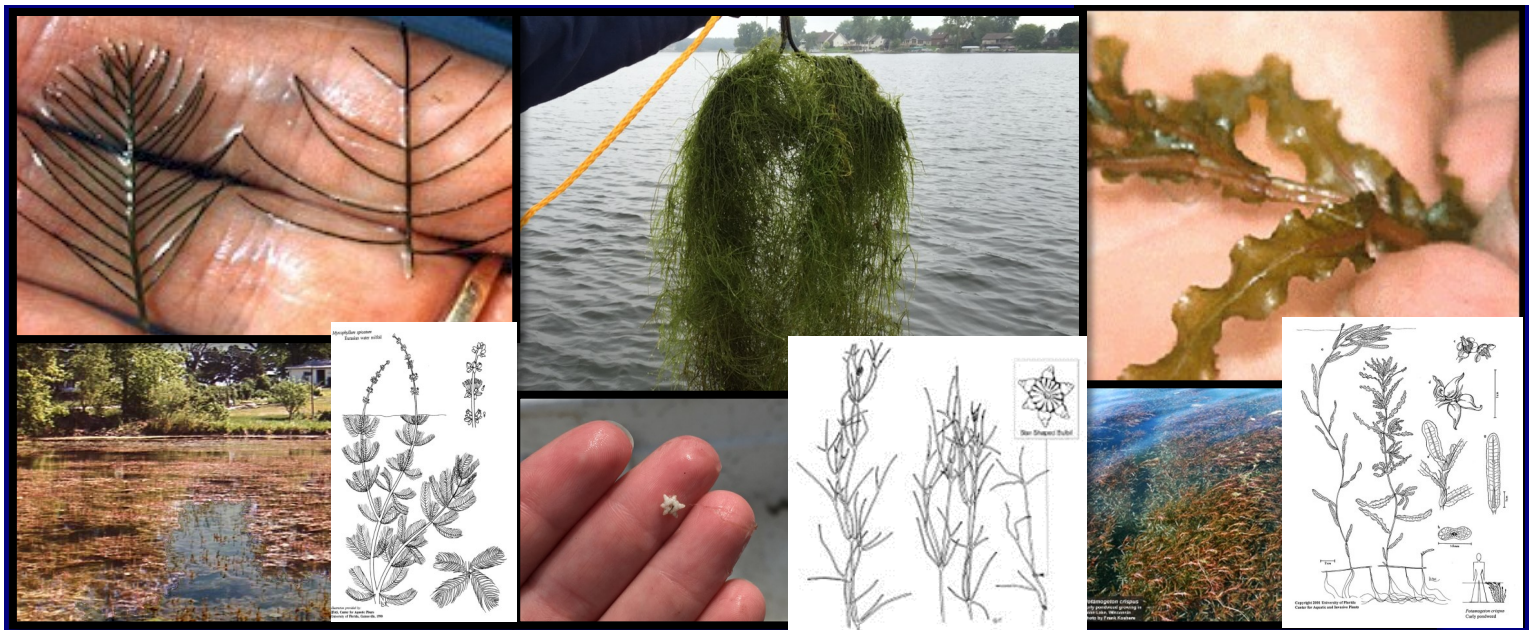
**Evaluated by:** Casey Shoaff **Reviewed by:** Bre Grabill **Date:** Sept. 2020



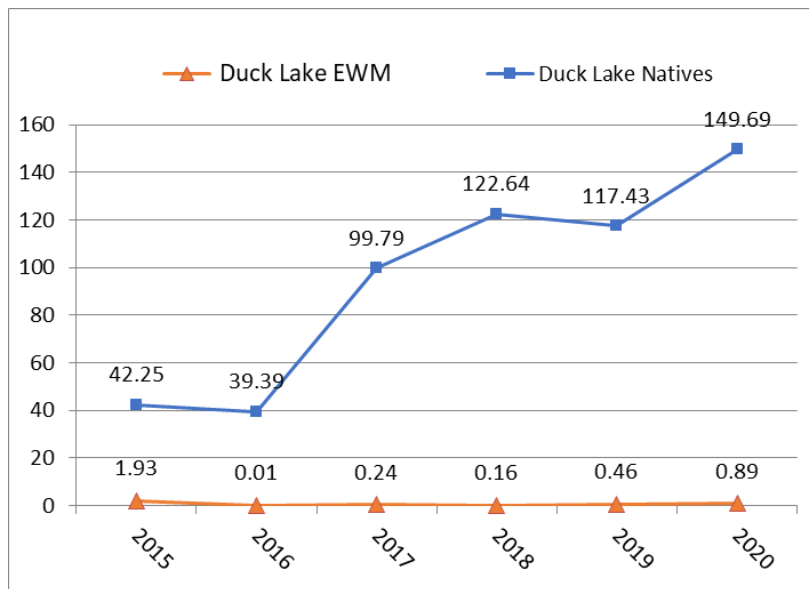
Duck Lake was surveyed in throughout 2020, by experienced PLM scientists. The goal of these surveys was to identify any exotic species and document native plant diversity. An AVAS Survey was performed in September, using EGLE approved survey techniques which broke the lake down into 174 segments to document all vegetation present by species and density. Out of the 174 sites surveyed, twenty submersed native species were found as well as sparse EWM. Overall, the growth in Duck Lake is moderate and Chara and various pondweed are the most prevalent species found. Chara is a vital part of the lake ecosystem, providing sediment control and is a natural filter for the lake, while providing habitat for fish.

## 2020 Service Timeline:

<u>Service</u>	<u>Date</u>	<u>Acres</u>
Survey	6/9	—
EWM Treatment	6/18	16.2
Phrag Survey	6/29	—
Survey	7/27	—
EWM Treatment	7/27	1.6
Phrag Treatment	9/10	—
AVAS Survey	9/14	—



**Exotic Plants**—Exotic plant species cause most of the serious weed problems in Michigan’s lakes. Exotic plants (or nonnative) are plants that are not native to this geographical area, which have been brought to the region inadvertently. Because they often have few natural enemies (their pests, pathogens, etc. may not have come over with them) therefore, they grow out of control. When exotic aquatic plants such Eurasian watermilfoil, Starry stonewort and Curlyleaf pondweed invade a lake, they often form extensive dense populations, crowd out native species, negatively impact fisheries, reducing the quality of habitat for other organisms and impacting the entire lake ecosystem. Management efforts are underway across Michigan to reduce the spread of nonnative aquatic plants, yet typically property owners and local municipalities are left to oversee and pay for management efforts.



This graph compares native plant cover to nonnative plant cover throughout Duck Lake. Participating in an Annual management program, allows plant trends to be tracked over time. This allows for oversight over nonnative plants as well as tracking new infestations of any plants (early detection rapid response for nonnative species) and fluctuations in the native plant community. An Annual management program can be vital in tracking changes over time and a great addition to any citizen scientist programs underway.

**Duck Lake’s Recommended Management Program:**

- Survey Program including:
  - Annual AVAS Survey
- Water quality evaluation (optional)
- EWM and Phragmites Treatments, as needed