



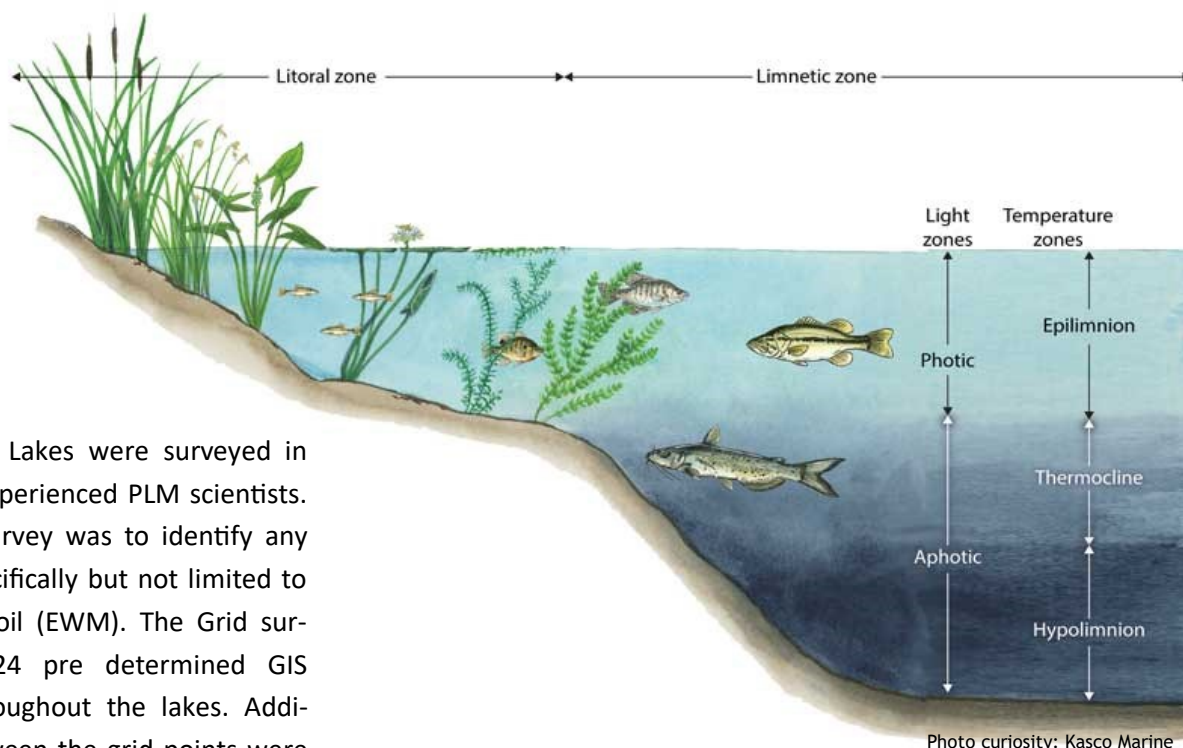
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Lake Evaluation Summary

Lake Name: West & East Twin Lakes **County:** Montmorency

Evaluated by: PLM Staff **Reviewed by:** Bre Grabill **Date:** August 2022

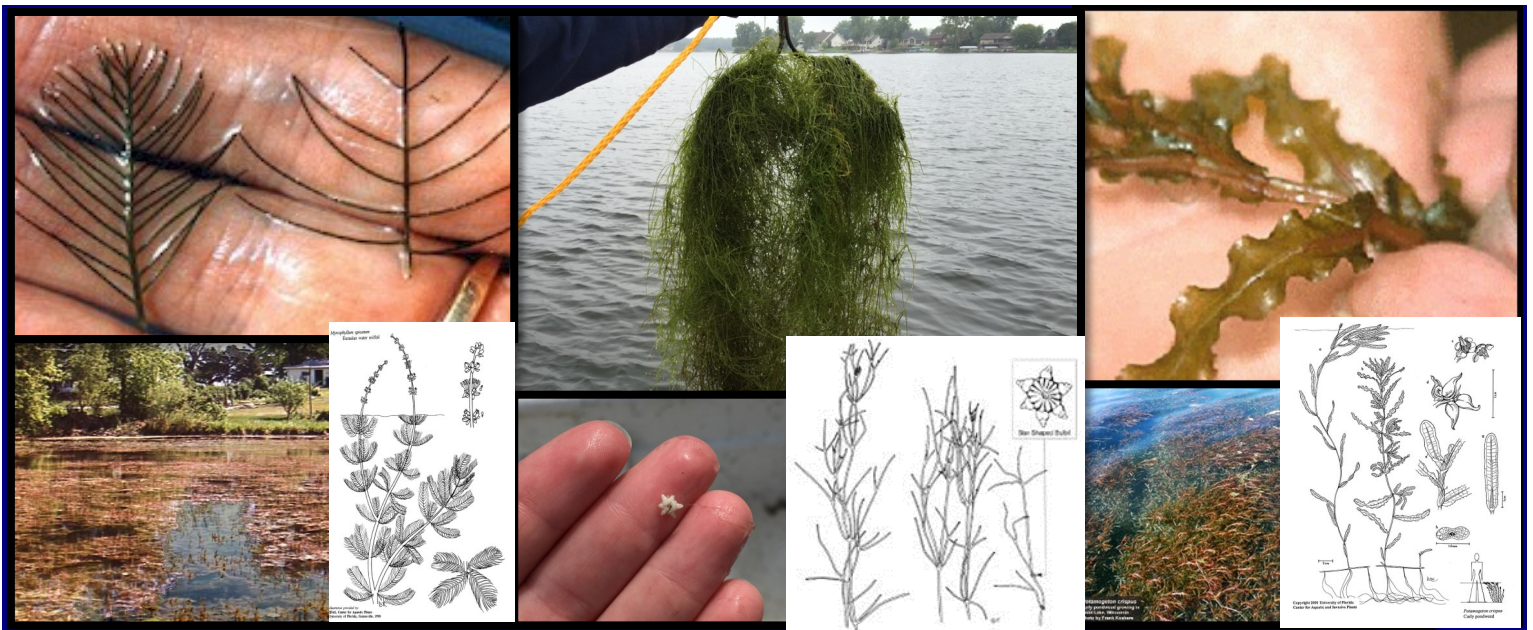
Purpose of evaluation: AVAS Survey Evaluation



West & East Twin Lakes were surveyed in August 2022, by experienced PLM scientists. The goal of this survey was to identify any exotic species, specifically but not limited to Eurasian watermilfoil (EWM). The Grid surveys included 1024 pre determined GIS points, spread throughout the lakes. Additionally, areas between the grid points were surveyed as well, which allowed for additional EWM to be found. Out of GIS sites surveyed, 16 submersed native species were found on West Twin Lake while 12 were found on East Twin Lake. EWM was only found growing on West Twin Lake—no nonnative growth confirmed in East Twin Lake. EWM needs to be managed throughout West Twin Lake to prevent further spread.

West & East Twin Lakes' Recommended Management Program:

- Survey Program including Annual or Bi-Annual Grid Survey
- Water quality evaluation (optional)
- Collect additional permissions from property owners for treatment, if needed
- EWM Management on West Twin Lake —i.e. Herbicide treatments
- Consider of additional nutrient abatement on East Twin Lake



Exotic Plants—(from left to right: Eurasian watermilfoil (EWM), Starry stonewort, Curlyleaf pondweed (CLP)) 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 as 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.

The graphs to the right compare native plant cumulative coverage and EWM cumulative coverage in both West & East Twin Lakes. The top graph shows West Twin Lake’s EWM infestation, in comparison to the native plant community. The EWM population is very low, a sign of the success of the Association’s management efforts. The native growth on West Twin has shown stability, which is excellent. Improving the native plant community in a waterbody is a top priority in lake management. The bottom graph shows East Twin’s native plant growth as well as EWM. EWM has not been documented in the lake, which is a very positive sign. The native plants have shown a decrease over time. Although seasonal fluctuations are normal, a continual decrease can cause some concern. Further monitoring of water quality parameters and monitoring to ensure the fishery is stable may be appropriate next steps. Additional survey work in future years will allow those plant trends to be further reviewed. Regular surveys allow 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. Overall, the native growth in both lakes is relatively low but each lake has good plant diversity.

