

2018 Diver Removal Summary – Rice Lake, Barron County HWM Control Project

LEAPS, July 2018

In early June, during a CLP bedmapping survey of Rice Lake in Barron County, two Lake Education and Planning Services (LEAPS) employees discovered what looked like Eurasian watermilfoil in Clearwater Bay off the south basin of Rice Lake (Figure 1). Samples of the suspect plants were collected and subsequently identified by aquatic plant experts and DNA testing as hybrid watermilfoil, a cross between Eurasian watermilfoil (non-native) and northern watermilfoil (native).



Figure 1: Suspect milfoil plants in Rice Lake, Barron County (June 5, 2018)

For all intents and purposes, when a hybrid of Eurasian watermilfoil is discovered in a lake, it is treated very similarly to Eurasian watermilfoil, in that it is considered a non-native, invasive, aquatic plant species. Once discovered and vouchered, several things typically happen. 1) the boating accesses on the lake that has the new discovery are posted with information signs so the public is aware of the new invasive species; 2) efforts are made to do a broader announcement of the new finding through news releases and public presentations; 3) aquatic plant survey work is completed in the entire waterbody to determine the extent of the new infestation; and 4) management planning and implementation is completed to begin control/removal of the new invasive species.

All of these things occurred on Rice Lake within a few weeks of the initial discovery. Resource professionals with LEAPS, Endangered Resource Services, and the WDNR viewed the plant samples that were collected from the lake on the day it was discovered. A day later, a meandering, littoral, survey of the entire lake was completed. Several more suspect plants were discovered, but fortunately all plants found were in the Clearwater Bay area of Rice Lake, and nowhere else (Figure 2).

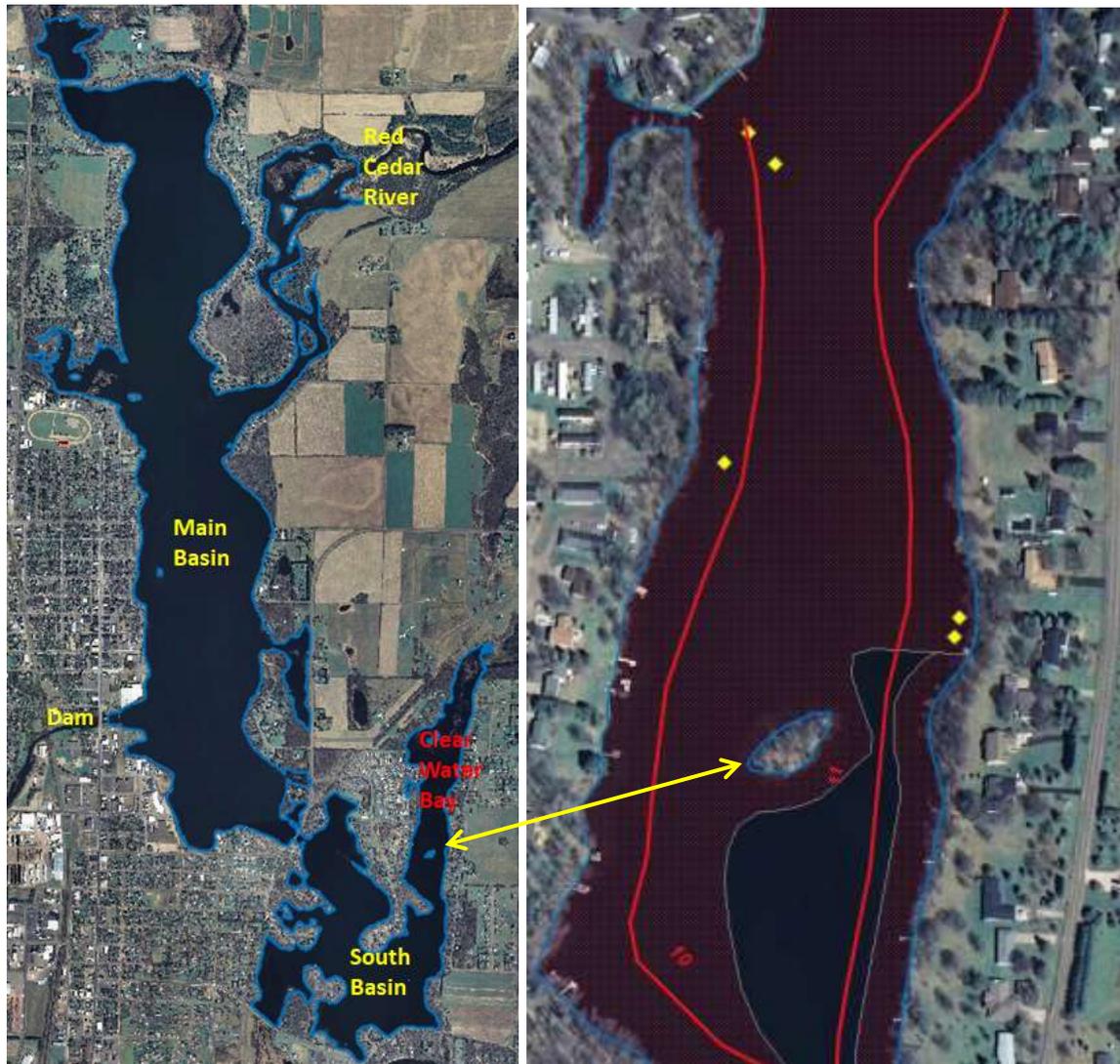


Figure 2: Clearwater Bay and early locations of Hybrid watermilfoil

Once the suspect plant was discovered and confirmed, the Rice Lake Protection and Rehabilitation District (RLPRD), LEAPS, and the WDNR started planning for removal and control of the offending plant. Management planning and implementation included several parts. First off, mechanical harvesting of curly-leaf pondweed early in the season, and dense growth of native aquatic vegetation later in the season was suspended in Clearwater Bay so a more comprehensive survey of the area could be completed. Second, additional meandering survey work was completed to locate plants to be physically removed using both rakes from the surface and divers underwater. Third, a small-scale application of

aquatic herbicides was planned and implemented in mid-July. And finally, a WDNR early detection and rapid response grant was applied for and approved to complete a whole-lake, point-intercept, aquatic plant survey in late July/August of 2018.

Aquatic Plant Survey Work (Figure 3)

Several meandering surveys of Rice Lake and Clearwater Bay were completed in 2018. On June 6th, a quick meandering survey was done to confirm suspect plant finding from June 5th. On June 21st, a more deliberate survey of the Clearwater Bay area of the lake was completed by LEAPS. The purpose of this survey was to locate as many plants as possible to prepare for a day on the water with scuba divers to implement physical removal of HWM. Approximately 30 EWM plants were marked with buoys to provide a starting place for diver removal scheduled for June 22.

Another deliberate meandering survey was completed on July 16th. Several more plants were discovered and rake-removed. This survey also served as a pre-chemical treatment survey of two areas totaling 0.80 acres set up for chemical treatment using Aquastrike® with the combined active ingredients 2,4-D and diquat. Chemical treatment of these two areas was completed on July 24th.

A fall survey of both Clearwater Bay and the south basin of Rice Lake was completed on October 16. This survey served as a post-chemical treatment survey and to begin planning for the 2019 season. During this survey several suspect milfoil plants were identified both in Clearwater Bay and at one location in the south basin, but due to the difficulty of identifying HWM when native milfoils including northern, various-leaved, and Farwells are present these sites were not confirmed as “definite”, although they were mapped.

Subsequent survey work in the spring of 2019, and several surveys during the summer season failed to find any new or additional HWM.

Also completed in August 2018, was a whole-lake, point-intercept survey of the entire lake. This survey failed to turn up any HWM on the rake or in-between sampling points suggesting management actions earlier in the season were successful and removing the target species.

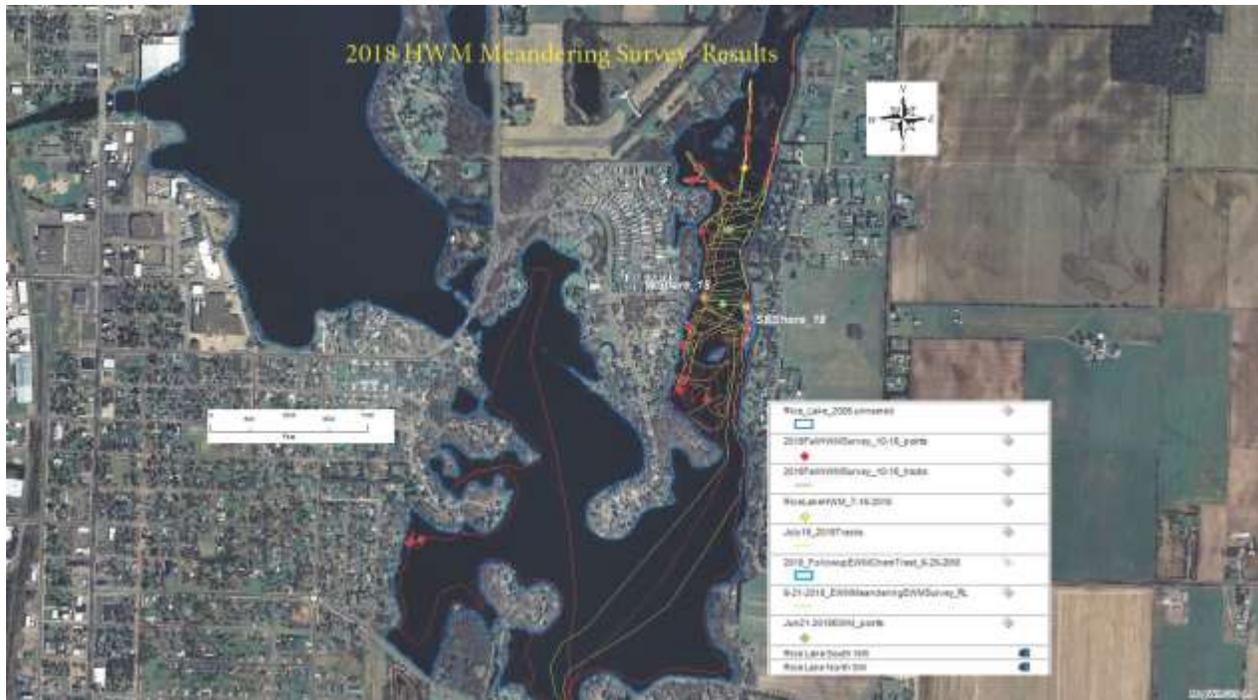


Figure 3: Three official meandering surveys of Rice Lake, the south basin and Clearwater Bay (Appendix A)

Diver and Rake Removal of HWM

On June 22, two RLPRD employees, two LEAPS employees, and a scuba diver from TSB Lakefront Restoration in Jim Falls, WI met at the boat landing on the south basin at 8:30am to spend several hours in Clearwater Bay to physically remove as much suspect HWM as possible. A total of 4 hours were spent on the lake. Upwards of 80 offending plants were removed via the scuba diver, a snorkeler, and with a rake. All plants were collected at the surface and put in garbage bins for transport to the shore. Two different garbage bins were filled with HWM removed from the lake. Plants were later disposed of by LEAPS on upland well away from any lake or other waterway.

Chemical Treatment of HWM

As a follow-up to physical removal, two areas of Clearwater Bay totaling 0.80 acres were chemically treated using Aquastrike, an aquatic herbicide that combines 2,4-D (a systemic herbicide) with diquat (a contact herbicide). This combination of herbicide was used to provide a double hit on any HWM that was missed during the physical removal project about a month earlier. One area totaling 0.05 acres was treated on the west side of Clearwater Bay where the first several HWM plants were identified, and subsequent plants removed. The second, larger area totaling 0.75 acres was located along the east shore of Clearwater Bay where most of the HWM plants identified and removed were located. The herbicide application was completed by Northern Aquatic Services on July 24. Several informal surveys

completed between the July 24th application and the final October 16th fall survey found no new HWM in the treated areas, Clearwater Bay, or the south basin of Rice Lake.

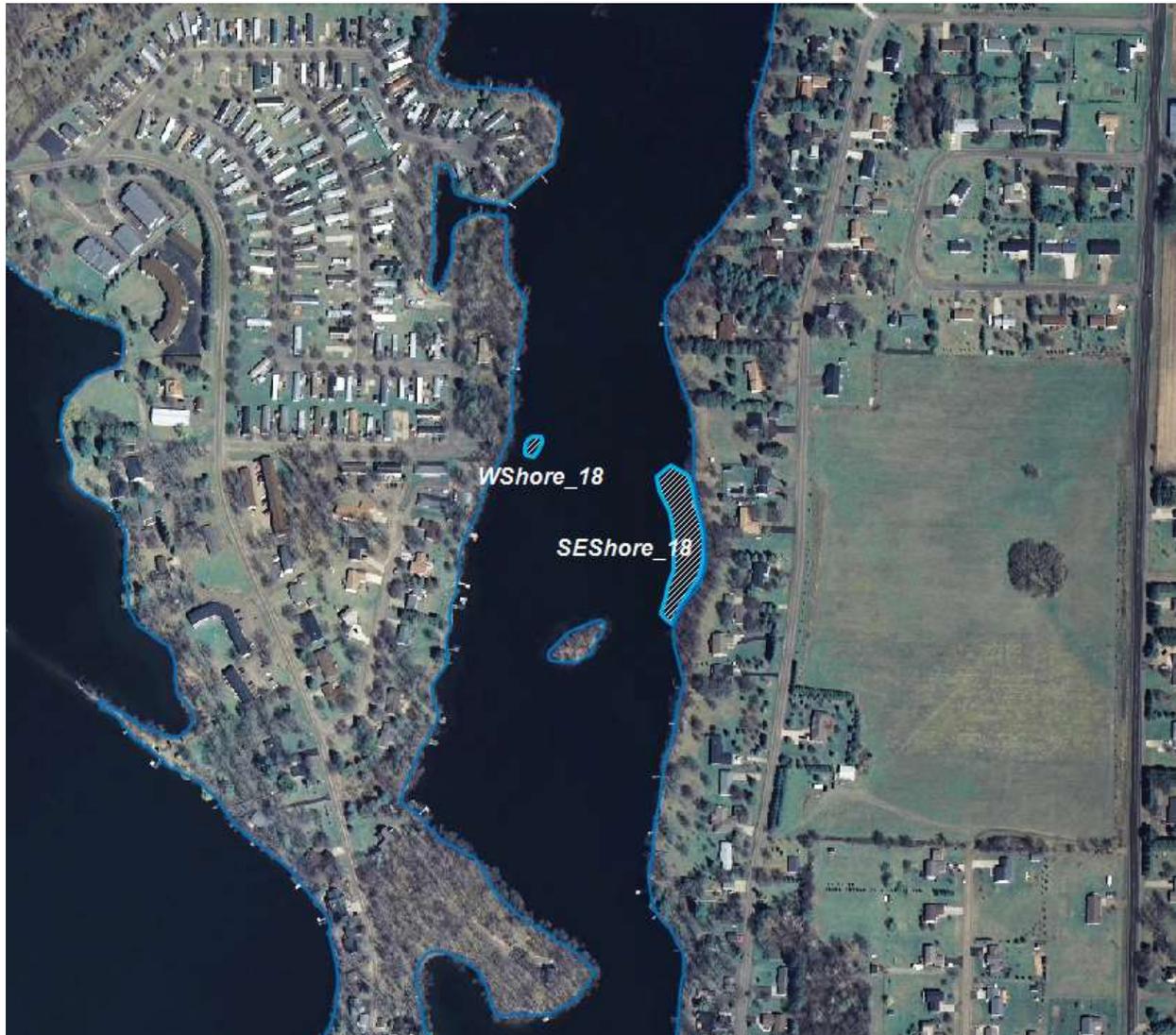


Figure 4: July 24, 2018 Chemical treatment areas in Clearwater Bay, south basin, Rice Lake

As previously mentioned, 2018 fall survey work in Clearwater Bay and the south basin failed to identify any new locations for HWM, at least not that were definitively identified as such. Subsequent survey work in the spring of 2019 and throughout the open water season, also failed to identify any new locations with HWM. As such, no management was implemented in 2019, other than survey work and physical removal of a few suspect plants.

Results from 2018 and 2019 survey and management work are being used to update the existing Aquatic Plant Management (APM) Plan for Rice Lake with new portions specifically dealing with HWM. It is expected that the new APM Plan will be complete in the spring of 2020.