

Eurasian Watermilfoil in the Briggs Lake Chain: 2021

Rush Lake (#71-0147) – July 16, Sept 10

Briggs Lake (#71-0146) – Sept 10

Julia Lake (#71-0145) – Sept 10

Big Elk Lake (#71-0141) – July 16, Sept 27



Survey, Analysis, and Reporting by:

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Purpose of Survey

These surveys were conducted to locate and delineate areas of Eurasian watermilfoil (*Myriophyllum spicatum*, henceforth referred to as EWM) in Briggs Lake, Julia Lake, Rush Lake, and Big Elk Lake in the summer of 2021. The results from these surveys will help to guide management of EWM in the lakes, and meet the survey requirements for DNR permits to treat, harvest, or hand-pull EWM.

Survey Method

EWM Delineation Surveys

Freshwater Scientific Services surveyed Rush Lake and Big Elk Lake on July 16 to determine if any mid-summer herbicide treatments were warranted. We also conducted subsequent late-summer EWM surveys in September on all four lakes to look for any new areas of EWM. During each of these surveys, we navigated a meandering transect over the vegetated portion of each lake. While navigating these search paths, we used a combination of surface observations, sonar readings, and rake tosses to locate and delineate areas of EWM growth. Sonar and visual assessments were conducted continuously, with subsequent rake tosses to assess EWM presence and abundance at locations where plants were not identifiable from the surface.

Results & Management Context

EWM in the Briggs Chain

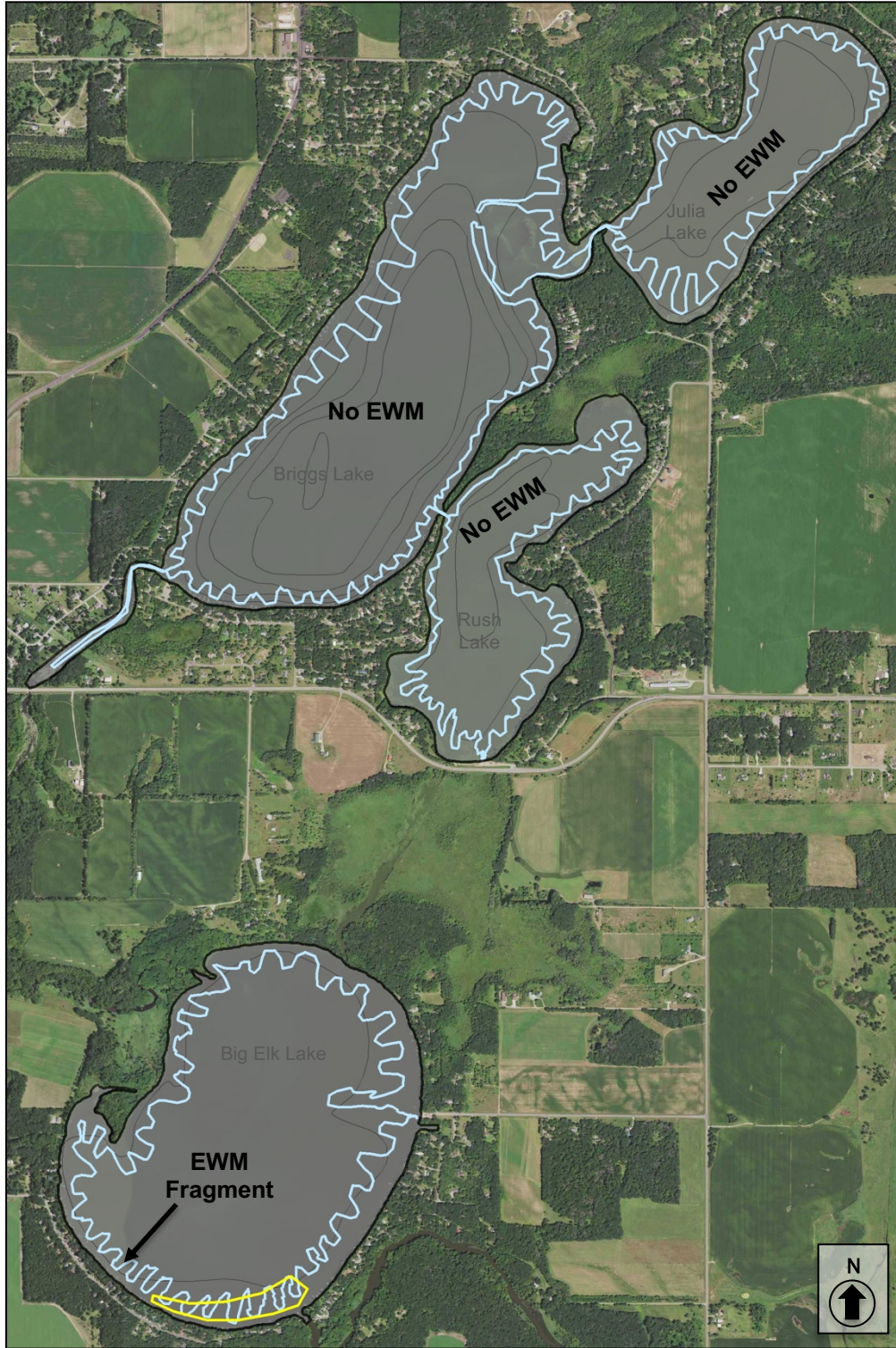
During the 2021 surveys, we did not find any areas of EWM in the northern three lakes of the chain (Briggs, Julia, or Rush), however, we did find that the previously identified patch of EWM in Big Elk Lake had expanded relative to the extent seen in 2020 (see 2021 EWM report for Big Elk Lake). These findings suggest that the past management of EWM in Rush Lake has been extremely effective, however, the persistence and expansion of EWM in Big Elk suggests that the hand-pulling conducted in 2020 did not provide adequate control in that lake.

Consequently, the lake group decided to treat the identified area of EWM in Big Elk with herbicide in the summer of 2021. During the follow-up late summer survey on Big Elk Lake, we did not find any EWM in the treated area, indicating that the 2021 herbicide treatment effectively controlled EWM. However, we did find two EWM fragments floating ~200 yards west of the treated plot, indicating that there are still a few EWM plants somewhere in that area. At the time of the survey, water clarity was very low, so we were not able to visually locate any EWM plants in this area and we did not find any EWM with rake tosses. Based upon these findings, we expect to find a few EWM plants in 2022, but the abundance of EWM in the treated plot should remain very low.

Despite the successful control of EWM in Rush and Big Elk, we may see some patches of EWM reestablish from remaining roots or seeds in the coming years. To help ensure that any reestablished areas of EWM are managed before they can expand, we highly recommend that TLID and BLCA continue to conduct mid-summer surveys of these two lakes to locate any EWM, with a focus on the areas that have experienced EWM growth in the past.

Briggs Lake Chain

2021 Eurasian Watermilfoil Search & Delineation Survey



— Surveyed Path

▭ Treated Plot (10.4 ac)

We did not find any rooted EWM plants in any of the surveyed lakes, but did find 2 small floating fragments of EWM at one location in Big Elk Lake. This indicates that the 2021 herbicide treatment in Big Elk successfully controlled EWM in the treated plot, but there are likely some individual EWM plants remaining in the southwestern portion of the lake.

Surveyed: July/Sept 2021
Methods: Visual, Sonar, Rake
Surveyor: JA Johnson



Map produced for the
Three Lake Improvement District by:



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Online Resources & Contacts

Minnesota Administrative Rules for Aquatic Plant Management

<https://www.revisor.mn.gov/rules/?id=6280>

Minnesota DNR – Aquatic Plant Management Regulations & Permit Application Forms

<http://www.dnr.state.mn.us/apm/index.html>

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