

## Eurasian Watermilfoil in the Briggs Lake Chain: 2020

**Rush Lake** (#71-0147)

**Briggs Lake** (#71-0146)

**Julia Lake** (#71-0145)

**Big Elk Lake** (#71-0141)

2020 Surveys: July 15, August 11, & September 18



### Survey, Analysis, and Reporting by:

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[www.NALMS.org](http://www.NALMS.org)

## **Purpose of Survey**

These surveys were designed 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 2020. At the request of the Three Lake Improvement District, Rush Lake was surveyed in July to help guide any summer herbicide treatments, while the remaining lakes were surveyed in the late summer (Aug/Sep). These later surveys maximized the likelihood of finding any small areas of EWM by allowing any EWM time to grow to the water surface where it would be more easily found.

## **Survey Method**

### **EWM Delineation Surveys**

Freshwater Scientific Services surveyed Rush Lake on Jul 15 and Briggs, Julia, and Big Elk Lake on Sep 18, 2020, with an additional EWM search of Briggs Lake during the point-intercept plant survey conducted on Aug 11. During each of these surveys, we navigated a meandering transect over the portion of each lake that supported plants (generally <10 ft). In all, we surveyed a total path length of 38 miles across all 4 lakes. 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 abundance at locations where plants were not identifiable from the surface.

## **Results & Management Context**

### **EWM in the Briggs Chain**

During the 2020 surveys, we did not find any areas of EWM in the northern three lakes of the chain, however, we did find a new, localized area of EWM growth in Big Elk Lake. Although these findings suggest that the management of EWM in Rush Lake over the past few years has been extremely effective, the new infestation of EWM in Big Elk is concerning. This new area of EWM is near the outlet channel on the southeast shore of Big Elk; an area that regularly experiences substantial water movement, with particularly high flows during wet periods. Consequently, this area will need to use management strategies that account for this high water exchange, such as treating only during low-flow periods, using fast-acting contact herbicides (such as diquat or procellacor), dosing the area multiple times over a short period of time (split treatments) to maintain the required concentration and exposure time for EWM control, or using hand-pulling to remove EWM plants.

Despite the successful control of EWM in Rush Lake, it is likely that some EWM remains in the lake, so 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 continues to conduct annual surveys to locate any EWM in the lakes, with a focus on the areas of Rush Lake and Big Elk Lake that have experienced EWM growth in the past 5 years.

# Briggs Lake Chain

## 2020 Eurasian Watermilfoil Search & Delineation Survey



**—** Surveyed Path  
(38 miles)

**EWM Density**

- 1 (light)
- 2 (moderate)

**▭** Management Plot (2.2 ac)

**Surveyed:** Jul-Sep 2020  
**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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