



Eurasian Watermilfoil (EWM) Delineation Report

Green Lake (Isanti County)

DNR Lake ID #: 30013600

Survey Date: 7/21/2020

Survey & Report Completed by: Eric Fieldseth, AIS Consulting Services

Survey Purpose & Methods

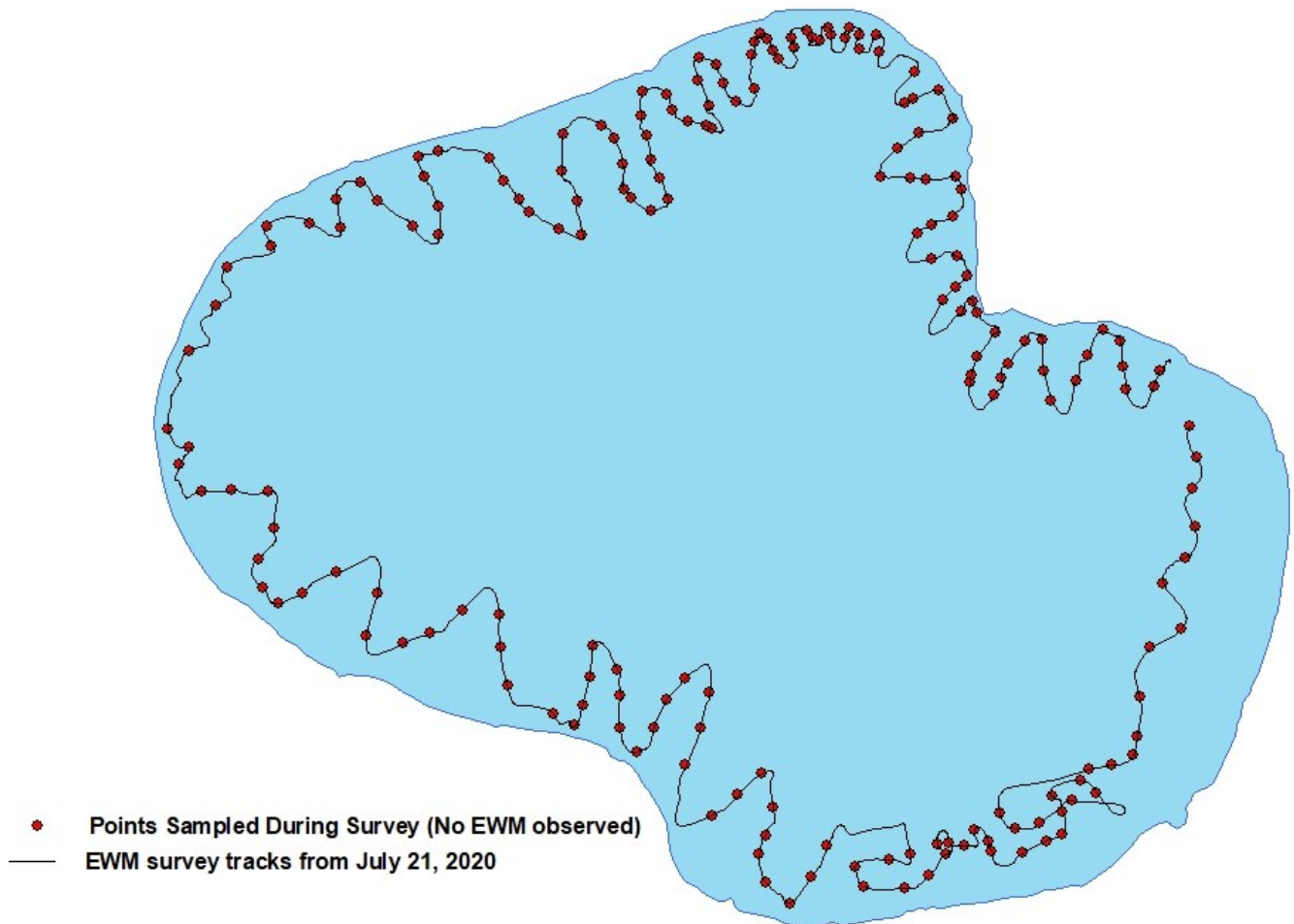
This survey was designed to determine the distribution and abundance of Eurasian Watermilfoil in Green Lake throughout the littoral area of the lake. Special attention was paid within 2019 control areas. Data from this survey will be used to help inform EWM management plans for 2020.

AIS Consulting Services completed a Eurasian Watermilfoil delineation in Green Lake on July 21, 2020. We maneuvered our boat in a meandering pattern throughout the littoral area of the lake, and used a combination of rake tosses, visual observation and our sonar unit to identify areas of EWM. When EWM was observed, we recorded a waypoint, assigned an estimated density rating, and recorded water depth.

Rake Density Rating

Estimated Density Rating	Description	Rake Sample
1	Low Density - scattered plants	Covering up to 1/3 of the rake head
2	Moderate Density - plants are common	Covering between 1/3 to 2/3 of the rake head
3	High Density—heavy growth, dense stands of plants	Covering over 2/3 of rake head

Figure 1. Results from Green Lake EWM Delineation on July 21, 2020



During our survey, we sampled 192 locations around the lake. We did not observe any Eurasian Watermilfoil during the survey. Native species observed included Coontail, Clasp Leaf Pondweed, Chara and Bushy Pondweed (*Najas flexilis*). We also observed some scattered Curlyleaf Pondweed plants, but overall they were sparse. Coontail appeared to be the most abundant plant growing during this survey. Dense growth of Coontail was found along the shoreline in many areas of the lake. Filamentous algae was often found growing on the Coontail, creating the appearance of the thick mats of vegetation around the lake. The Coontail with filamentous algae growth were at nuisance levels in some areas of the lake, and are likely impacting navigation in those areas. Pictures of Coontail growth with filamentous algae can be found on the final page of this report.

Figure 2. Survey results with 2019 EWM control areas and 2020 CLP treatment areas

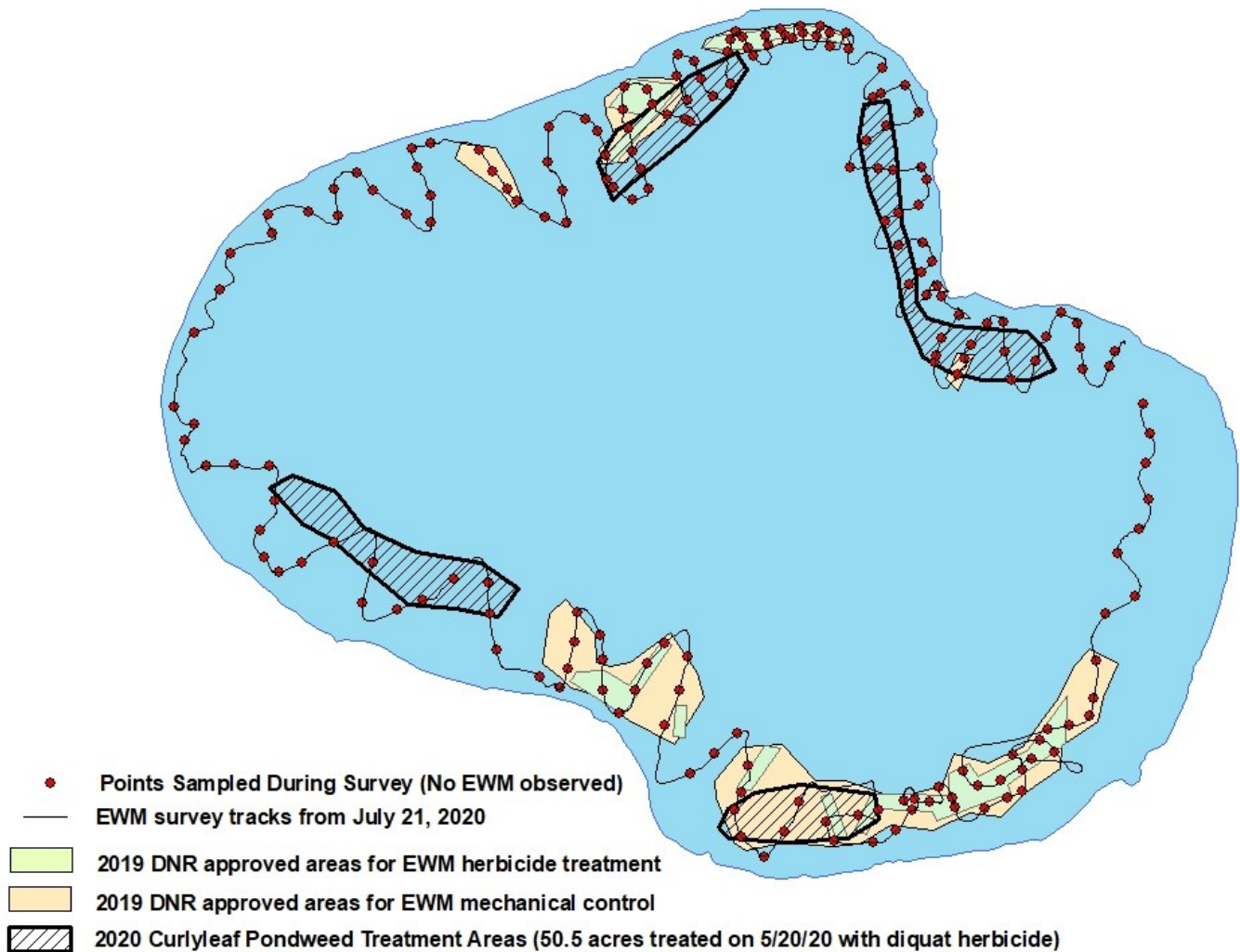


Figure 2 above shows our survey results overlaid on the 2019 EWM control areas as well as the areas that were controlled for Curlyleaf Pondweed in 2020. 50.5 acres of Curlyleaf Pondweed were treated on May 20, 2020 with diquat herbicide. Diquat is a contact herbicide and can control many species, including both Curlyleaf Pondweed and Eurasian Watermilfoil. AIS Consulting Services completed a Curlyleaf Pondweed delineation on May 14, 2020, however, we did not observe any Eurasian Watermilfoil during that survey. If Eurasian Watermilfoil was present during the May 20th treatment, even at low abundances, it's very likely the treatment of 50.5 acres within the lake for Curlyleaf Pondweed also could have provided some control of Eurasian Watermilfoil. When large areas are treated, some chemical dispersion will occur outside the intended treatment areas, providing for larger areas of control. We cannot say for certain that this was the case in Green Lake and explains why we did not find Eurasian Watermilfoil during our July 21st survey, but it is a plausible explanation. We recommend continued surveys in 2020 to track growth of both Curlyleaf Pondweed and Eurasian Watermilfoil.

Images from July 21, 2020 EWM survey. Dense Coontail growth with filamentous algae attached.

