



GOLDEN SANDS

RESOURCE CONSERVATION & DEVELOPMENT COUNCIL, INC.

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a 501(c)3 non-profit conservation organization

Conservation That Works!

White River Flowage Flowering rush Post - Early Detection and Response 3-yr program

Year 6 Activity Report

Monitoring survey and handpulling activities 2020

Survey method: On June 23, 2020, Golden Sands RC&D (Resource Conservation & Development) completed a visual survey for flowering rush on the White River Flowage. Anna Cisar conducted the survey, along with AIS Technician Shawn Henby. White River Flowage resident and active flowering rush volunteer, Lynn Bockenbauer accompanied staff for the first portion of the survey identifying areas that she has been removing flowering rush earlier this season.

The survey, completed by kayak, covered the entire shoreline starting at the Bockenbauer residence and working upstream to “ground zero” (the source population and where chemical treatments have been applied, [44.038089, -89.272116](#)), then downstream along the eastern shore to the dam and back upstream along the western shore to the original starting point. All islands, small coves and bays were surveyed as well as shallow areas where native vegetation formed mats on the water surface. These areas historically collect floating rhizomes and young flowering rush plants.

All observed flowering rush locations were recorded using a handheld GPS. The GPS points were added to aerial maps to show the flowering rush distribution. Figure 1 below shows the June 2020 map.

Handpulling methods: Golden Sands RC&D staff used proper removal techniques to handpull the flowering rush, loosening sediments when needed (in firmer sand), and carefully extracting the entire root mass, with care to avoid breaking off bulbils. Staff also looked for and pulled any floating bulbils that may have broken off.

Flowering rush was pulled from kayaks and loaded into a bucket, plants were then dried out and burned at a later date.

Handpulling Results: With the success of the previous years of management volunteer led handpulling work events were not done this year. In place of a volunteer led effort, Golden Sands staff handpulled the flowering rush as the survey was conducted. See Figure 1 below for the full extent of White River Flowage’s survey and handpulling efforts. Figure 2 takes a closer look of Figure 1,

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focusing on “ground zero” and the upstream reaches of the Flowage that have historically had the largest population.

With the exception of 3 areas, all plants were removed during the survey. Staff, along with flowering rush volunteer, Lynn, spent an hour handpulling flowering rush from ground zero, removing roughly 70% of the population. However, given time constraints needed to move on with the rest of the survey. The scattered area of flowering rush that was not removed near the northern end of White River Trail, denoted by the green X, was too deep to effectively remove. The 1 plant that was not removed, across from the boat landing and denoted by a yellow X, was not handpulled because staff was pushed off the Flowage by a storm..

During the survey, in “ground zero” (the previous chemical treatment area), plants were green, robust, and thriving. This area is the gray polygon at the top of the map, see Figure 1 and 2 below.

This time of year, the plants were robust and held together very well for handpulling. They pulled easily from the loose muck. In the very few areas where firmer, sandy sediments are present, the roots need to be loosened before pulling.

Since this survey was conducted in June, Lynn has continued her flowering rush removal efforts and reported removing almost all of the plants up at “ground zero.” As well, as monitoring the rest of the Flowage and handpulling any remaining plants

It is important to note that while the previous five years of flowering rush management has been successful, and with the handpulling by Lynn and Golden Sands staff this year, there will still likely be a few plants to come back every year.

Notable observations: The current appears to create a boundary the plants do not spread beyond easily. At ground zero, no flowering rush was observed east of the channel. Major spread is from the channel westward. Major locations for monitoring would be at any collection points, such as downed trees and weed beds where drifting plants may get hung up.

Focus for volunteers: Monitoring and handpulling efforts should focus on spread downstream from ground zero. Major collection points include:

- 1) From channel westward
- 2) Downed trees where plants may snag
- 3) Weed beds immediately downstream
- 4) Small floaters on weed mats

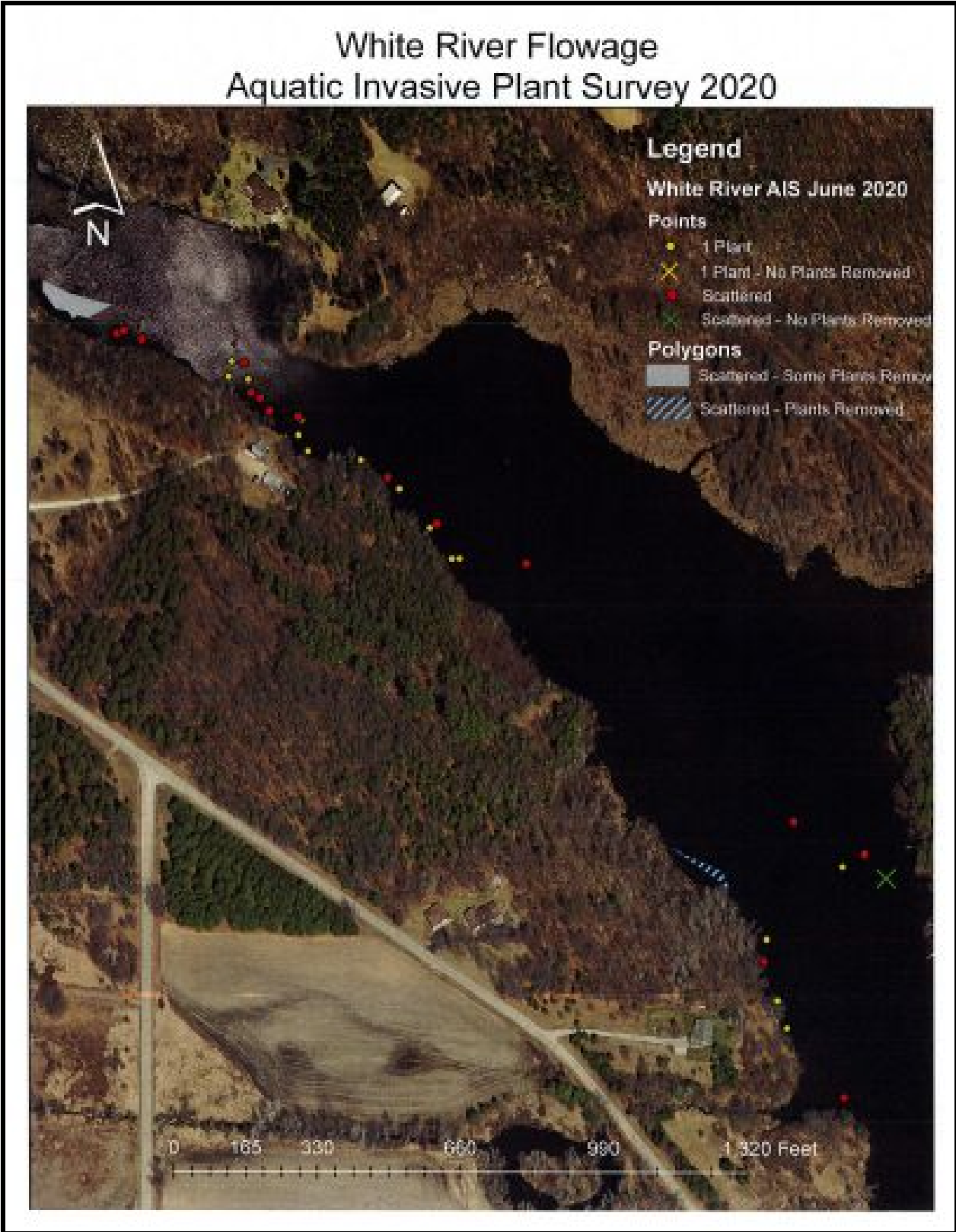
Additional efforts can be spent at ground zero handpulling any plants that continue to grow back in the area.

Figure 1. Flowering Rush Survey and Handpulling Efforts: Entire White River Flowage



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Figure 2. Flowering Rush Survey and Handpulling Efforts: Northern Portion of White River Flowage



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