



GOLDEN SANDS

RESOURCE CONSERVATION & DEVELOPMENT COUNCIL, INC.

1100 Main Street, Suite #150

Stevens Point, WI 54481

Phone (715) 343-6215

www.goldensandsrcd.org

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 7 Activity Report

Monitoring survey and handpulling activities 2021

Survey method: On July 16, 2021, Golden Sands RC&D (Resource Conservation & Development) completed a visual survey for flowering rush on the White River Flowage. Chris Hamerla conducted the survey while LTE Kendra Kunderling assisted in removal. White River Flowage resident and active flowering rush volunteer, Lynn Bockenbauer accompanied staff identifying areas that she has been removing flowering rush earlier this season.

The survey, completed by kayak, covered the entire shoreline starting at “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 July 2021 map. All observed plants were completely removed except as noted in yellow on figure 1.

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. Any potential sites where bulbils may still be left in the sediment due to rocky substrate have been marked on the map by yellow dots as seen in Figure 1. Figures 2 and 3 take a closer look at these points and include GPS coordinates.

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

We are a 501(c)3 non-profit conservation organization celebrating 45 years of solutions for a healthy environment and economy.

Serving the Wisconsin Counties of Adams, Green Lake, Juneau, Marathon, Marquette, Monroe, Outagamie, Portage, Taylor, Waupaca, Waushara & Wood

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.

All plants that were identified were removed during the survey. Staff, along with flowering rush volunteer, Lynn, spent roughly an hour handpulling flowering rush from ground zero, removing any flowering rush observed.

During the survey, at "ground zero" (the previous chemical treatment area), plants were a combination of green, robust, and thriving plants, along with smaller, new growth plants. This area is the blue polygon at the top of the map, see Figure 1 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 July, Lynn will continue her flowering rush removal efforts and monitor the rest of the Flowage and handpull any remaining plants.

It is important to note that while the previous six 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 plants coming back every year. Continued monitoring is essential to managing the flowering rush.

Notable observations: The current appears to create a boundary the plants do not easily spread beyond. 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) Large bay directly north of White River Trail deadend (figure 1, yellow notation).
- 2) From channel westward
- 3) Downed trees where plants may snag
- 4) Weed beds immediately downstream
- 5) 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

White River Flowage Aquatic Invasive Plant Survey 2021 - Flowering Rush

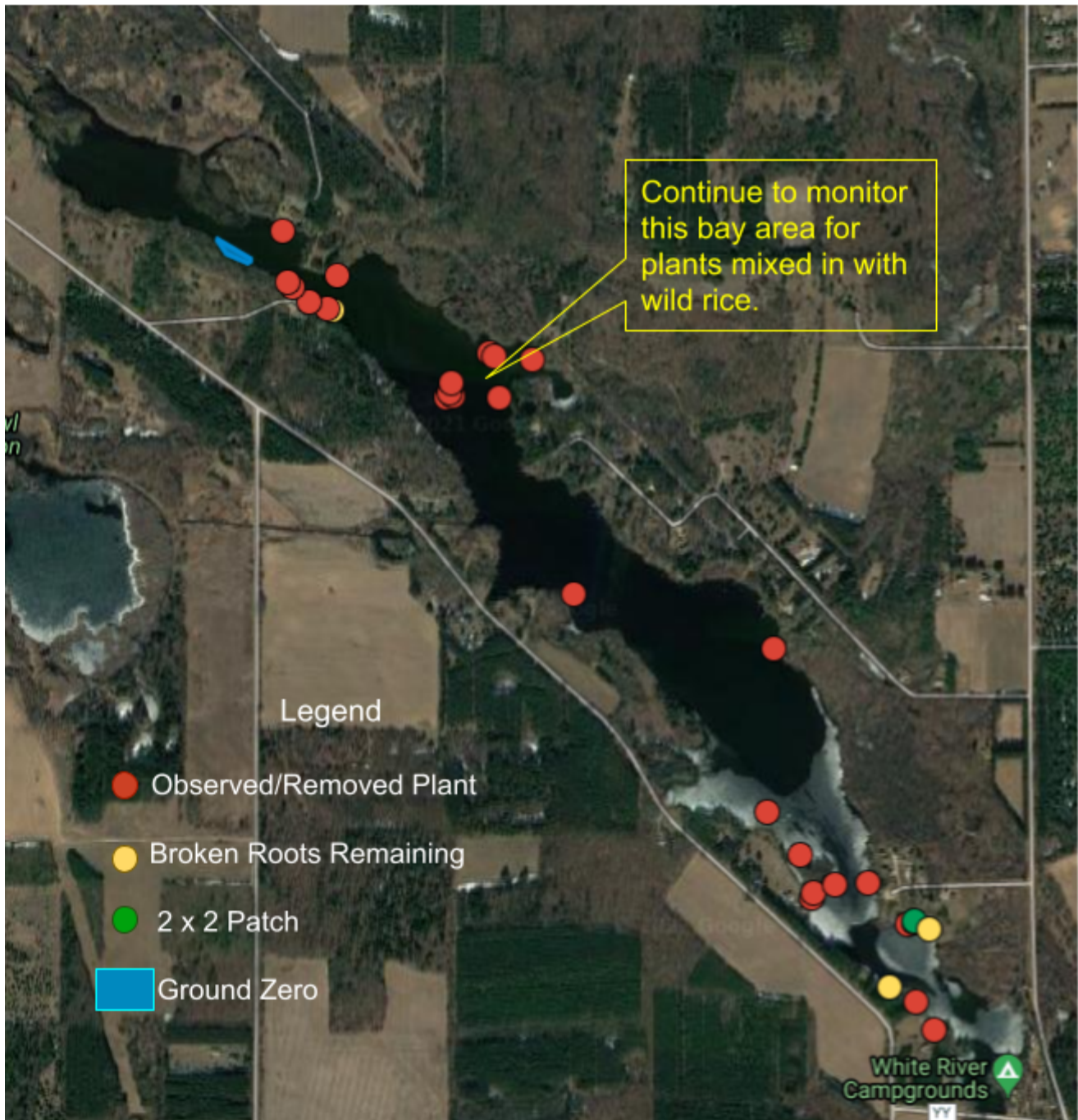


Figure 2. Flowering Rush Survey and Handpulling Efforts: Closer Look at Sites to Revisit. This site contains one plant at the yellow point where roots or bulbils may still be in the sediment.

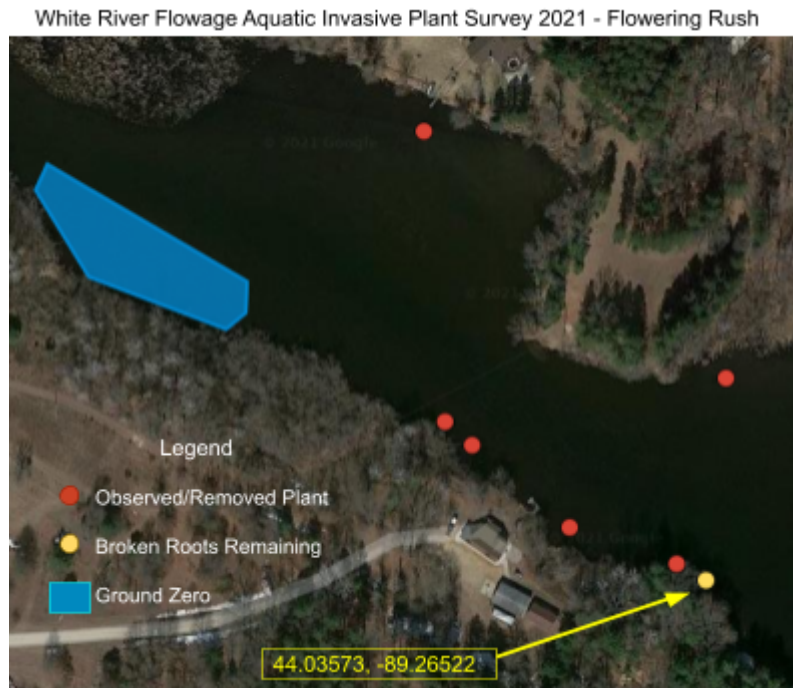


Figure 3. Flowering Rush Survey and Handpulling Efforts: Closer Look at Sites to Revisit. This site contains two plants at the yellow points where roots or bulbils may still be in the sediment. This site is located towards the bottom of the map, closer to the dam.

