
Hagerman Lake (Iron County, Michigan) Aquatic Invasive Species Monitoring Report

This is a product of biannual monitoring conducted on behalf of:

Hagerman Lake Property Owners' Association
Steve Sands, President

Contact: Chad Johnson (Director and Lake Steward Volunteer)

Prepared by:

White Water Associates, Inc.

Contact: Angie Stine

429 River Lane, P.O. Box 27

Amasa, Michigan 49903

Phone: (906) 822-7889; Email: angie.stine@white-water-associates.com

Cite as: *Stine, Angie. 2020. Aquatic Invasive Species Monitoring Report for Hagerman Lake (Iron County, Michigan). White Water Associates, Inc.*



Date: August 2020

INTRODUCTION

White Water Associates, Inc. has been retained by the Hagerman Lake Property Owners' Association to conduct biannual aquatic invasive species (AIS) monitoring in Hagerman Lake (Iron County, Michigan). White Water professional staff has had significant experience with the Hagerman Lake ecosystem having developed the 2018 Aquatic Plant Management Plan for Hagerman Lake and conducting AIS monitoring (even years) and water quality monitoring (odd years).

METHODS

For this survey, we conducted a thorough search of likely habitats for aquatic invasive species around the entire Hagerman Lake shoreline with special focus on the boat landings and other points of most likely introduction or colonization. The field work was conducted on August 25, 2020 by White Water aquatic biologist Angie Stine and field technician Sean Caron along with boat navigation assistance by Hagerman Lake steward Chad Johnson.

The search was conducted from a pontoon boat and began from the Johnson's home. Using the pontoon boat, we meandered searched around the entire lake and stopped at four target locations to look for AIS in the water and near shore. As part of the survey, a zooplankton tow net was used at three locations to monitor for spiny water fleas. The survey ended by wading and snorkeling at the boat landing area looking for AIS. The shoreline in the vicinity of the boat landing was also walked looking for anything out of the ordinary.



Angie Stine holding zooplankton net used to check for spiny water fleas (Photo by White Water Associates, Inc).

SURVEY RESULTS

There were no Aquatic Invasive Species found at the four locations surveyed or the boat landing. During the meander search there were three invasive species (three plant species) observed, including Reed Canary Grass (various locations on the shoreline – the geographic coordinates for one location were 46.07133; -88.78569), Pink Water Lily (46.05385; -88.78725), and the Aquatic Forget-Me-Not (46.07150; -88.78688). There are many Iris present along the shoreline of Hagerman Lake but at the time of this survey the Iris was not in bloom. I would suggest looking at the Iris in June when they are in bloom to see if they are yellow (non-native) or blue (native) in color.

Reed Canary Grass (*Phalaris arundinacea*), generally considered a terrestrial invasive species, was observed in a few locations along the shore. Reed canary grass has been found in nearly every county in Wisconsin and Michigan. It forms dense stands in wetland and riparian areas (Czarapata, 2005). It reproduces by spreading rhizomes, and seeds (Czarapata, 2005). It

is one of the first grasses to sprout in the spring, increasing its chances of out-competing other plants.

The Pink Water Lily was found at one location (Exhibit 1). This is an ornamental cultivar of the white water lily (they are the same species, *Nymphaea odorata*). It is considered to be invasive and future monitoring should determine the extent of this pink water lily in Hagerman Lake.



Exhibit 1. Pink water lily near shore at Hagerman Lake (floating leaves and blossom in red ellipse. Photo by White Water biologist, Angie Stine.

Aquatic forget-me-not (*Myosotis scorpioides*) can quickly crowd plant species and is able to form large monocultures. This, in turn, affects community compositions by reducing the number of native herbs (WIDNR, 2020). Aquatic forget-me-not is difficult to control due to its mechanisms for spreading (WIDNR, 2020).



Exhibit 2. Aquatic Forget-me-not (within red ellipse). Photo by White Water Associates biologist, Angie Stine.

Spiny water fleas are an aquatic invasive zooplankton that is found in a few lakes in the Upper Peninsula and Northern Wisconsin. A way to determine if they are present in a lake is to conduct a vertical zooplankton tow at various locations in the lake and looking at the sample to see if the tiny spiny water fleas are present. Exhibit 3 describes the locations and depths of the sites chosen. Samples were examined under magnification in the lab and there were no invasive zooplankton in the samples collected.

Exhibit 3. Zooplankton Samples from Hagerman Lake			
Date: 8/25/2020	GPS Coordinates		Depth of plankton sample (feet)
Site 1	46.04852	-088.78265	15
Site 2	46.05622	-088.77675	36
Site 3	46.05886	-088.77511	52

We appreciate the opportunity to serve the Hagerman Lake Property Owners' Association. If there are any questions about this report or special need of services, please contact us at your convenience.



(Signature)

August 30, 2020

(Date)

Dean B. Premo, Ph.D., President
White Water Associates, Inc.
Phone: 906-822-7889
Email: dean.premo@white-water-associates.com

Literature Cited

Czarapata, Elizabeth. 2005. *Invasive Plants of the Upper Midwest: An Illustrated Guide to Their Identification and Control*. University of Wisconsin Press. Retrieved 2014.
<<http://dnr.wi.gov/topic/Invasives/fact/.html>>

Wisconsin Department of Natural Resources. 2020. *Aquatic Forget-Me-Not (Myosotis scorpioides)*. Retrieved 2020.
<<https://dnr.wisconsin.gov/topic/Invasives/fact/AquaticForgetMeNot.html>>