
Bear Lake (Oneida County, Wisconsin) Aquatic Invasive Species Monitoring Report

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

Bear Lake Protection & Rehabilitation District
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Date: July 2021

INTRODUCTION

White Water Associates, Inc. has been retained by the Bear Lake Protection and Rehabilitation District to conduct annual aquatic invasive species (AIS) monitoring in Bear Lake (Oneida County, Wisconsin). White Water professional staff has had significant experience with the Bear Lake ecosystem having developed the 2018 Aquatic Plant Management Plan and Adaptive Lake Management Plan for Bear Lake and conducting annual AIS monitoring since 2018.

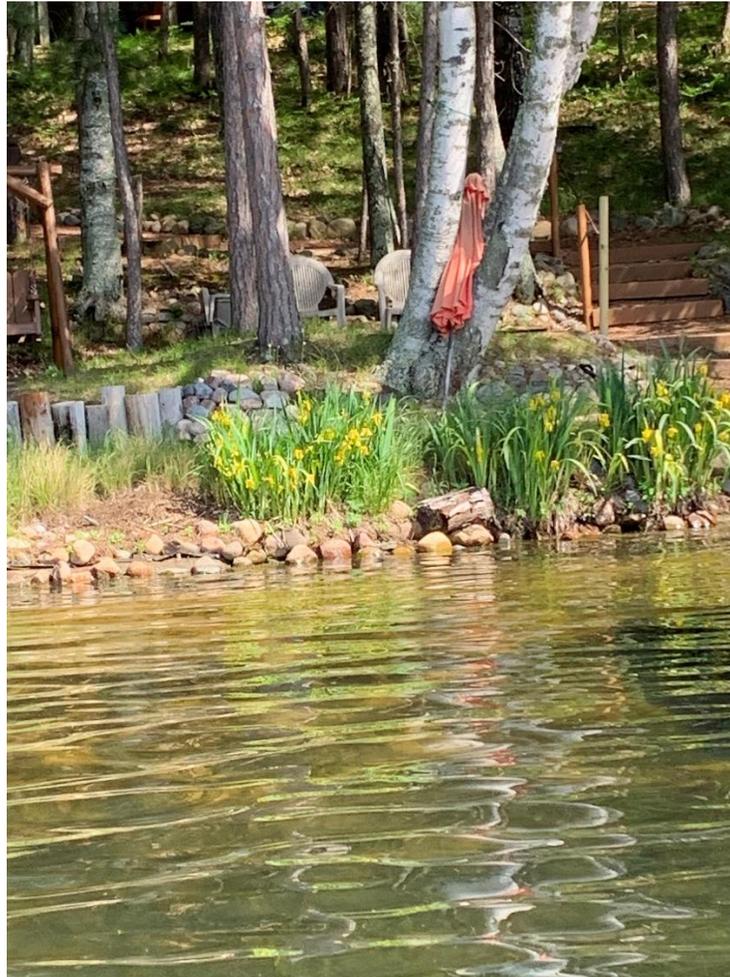
METHODS

For this survey, we conducted a thorough search of likely habitats for aquatic invasive species around the entire Bear Lake shoreline with special focus on the boat landings and other points of most likely introduction or colonization. The field work was conducted on July 20, 2021 by White Water aquatic biologist Angie Stine along with boat navigation assistance by Bear Lake steward Mic Austin.

The search was conducted from a pontoon boat and began from the Austin's home located next to the boat landing. Using the pontoon boat, we meandered searched around the entire lake and stopped at four target locations and snorkeled to look for AIS in the water and near shore. As part of the survey, an Ekman dredge was used at the deep hole to monitor for spiny water fleas. The survey ended by 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.

SURVEY RESULTS

Three established aquatic invasive species (two plant species and one animal species) were observed during this monitoring bout, including Yellow Iris, Purple Loosestrife, and Chinese Mystery Snail. At the time our 2021 survey, the Yellow Iris plant was not in flower, but plants observed along the north shore of the lake were likely of this species. Mic Austin confirmed that they have observed the Yellow Iris in bloom in these areas this June of 2021 by taking photos (the geographic coordinates for one location were 45.77150; -89.80489). Mic Austin has been working with notifying land owners about removing the Yellow Iris. When you remove them, a suggestion is that you could replace them with the Blue Flag Iris.



Yellow Iris along the shore of Bear Lake (Photo Credit Mic Austin).

Volunteers have been active for a number of year's hand pulling a few purple loosestrife plants each season at two locations (Site 1: 45.76414; -89.80900 and Site 2: 45.76964; -89.79953). During our 2021 meander search, one the one location on the island had Purple Loosestrife. The plants were not in bloom. We removed 10-11 plants at Site 2 (Island).

The aquatic invasive animal that is established in Bear Lake is the Chinese mystery snail. Chinese mystery snail empty shells were found at two of the target locations around the lake and at the boat landing.

Spiny water fleas are an aquatic invasive zooplankton that is found in a few lakes in 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 (suggested to do in September/October) or by the use of an Ekman dredge to sample the sediment to look for spiny waterfleas. Table 1 describes the location and depth of the site chosen. The sample was examined under magnification in the lab and there were no invasive zooplankton in the samples collected.

Table 1. Dredge Sample from Bear Lake			
Date: 7/20/2021	GPS Coordinates		Depth of dredge sample (feet)
Site 1	45.76768	-089.80016	22

We appreciate the opportunity to serve the Bear Lake Protection and Rehabilitation District. If there are any questions about this report or special need of services, please contact us at your convenience.



(Signature)

July 21, 2021

(Date)

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