GOLDEN SANDS RESOURCE CONSERVATION & DEVELOPMENT COUNCIL, INC.
Conservation That Works!
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A 501(c)3 non-profit conservation organization

Long Lake, Waushara County, WBIC 191100
Aquatic Invasive Species Early Detection Survey
July 1st, 2026

Golden Sands Resource Conservation & Development Council, Inc (RC&D) completed an Aquatic Invasive Species (AIS) Early Detection Survey (ED survey) on Long Lake on July 1st, 2026. The survey was contracted by the Long Lake Lake Association. ED surveys are a thorough survey of the lake's nearshore area looking for any AIS, both animals and plants, like zebra mussels and Eurasian watermilfoil (EWM). This monitoring protocol is used to locate pioneer populations of AIS, allowing for a rapid response strategy that may mean the difference between long-term management and potential eradication. The survey was completed by Golden Sands RC&D staff Chris Hamerla and Brooke Cherek. No new AIS were observed during the survey.

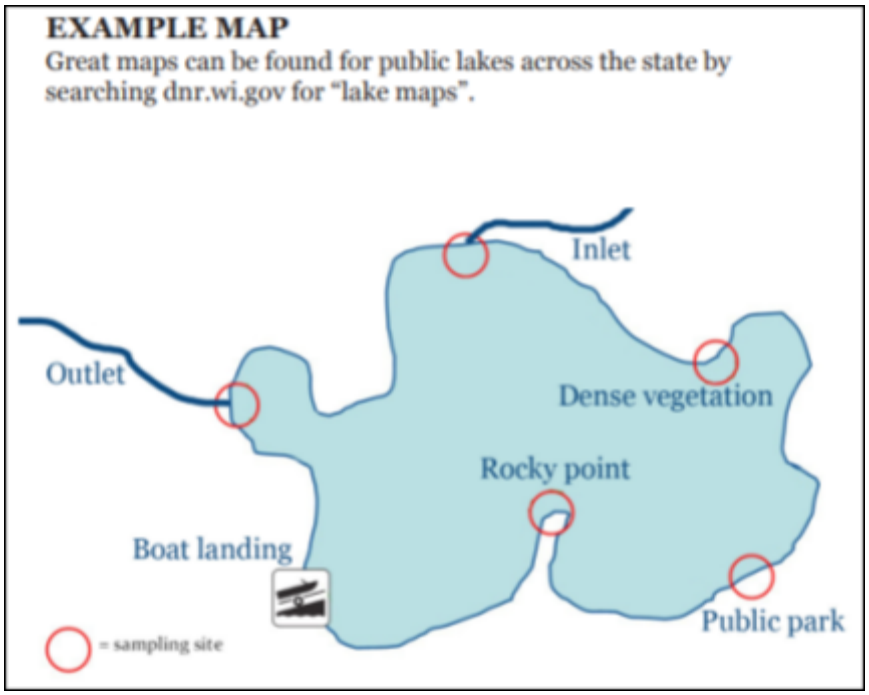
Aquatic Invasive Species

Aquatic invasive species (AIS) are plants or animals that are not native to a particular area and dominate an area where they are introduced. They can be very successful because they fill a niche that isn't occupied, are able to tolerate a wider range of living conditions, they don't have any natural predators or diseases or perhaps they begin growing earlier. EWM, curly-leaf pondweed and purple loosestrife are common examples of AIS. AIS can threaten an area both ecologically and economically. They can disrupt food chains and degrade habitat which negatively impacts fish, invertebrates and wildlife. Nuisance levels of AIS can reduce or even prevent recreational opportunities like fishing, boating, wildlife watching, etc... These reduced recreational opportunities have negative impacts to the local and statewide economy. AIS such as zebra mussels can negatively impact water quality, food chains, aquatic habitat, recreation and industry. Unfortunately the effects of AIS are difficult to foresee since the degree of impact can vary greatly from one place to another. One system may have noticeable negative effects from AIS while AIS in another nearby system may become a part of the community and have little to no negative effects.

AIS Early Detection Surveys

Early Detection (ED) surveys are completed by traveling to all boat landings and 5 predetermined nearshore sites around the lake, as well as meandering the shoreline, looking for existing or new AIS (see Figure 1 for an illustration of this survey protocol). Each boat landing is searched for 15 minutes, conducting a visual survey and the use of rake throws to sample the bottom of the lake. The nearshore sites are surveyed using the same protocol but for 10 minutes each. The shoreline meander is done between the sites, meandering slowly along the shoreline, throwing the rake to collect samples. If any AIS are found the location is noted using a GPS, as well as the density of the population.

Figure 1: Early Detection Example Map



Survey Summary

Survey conditions on July 1st were very good, with barely a breeze and clear skies, (image above, right). Good conditions remained until the last 15 minutes of the survey when storms moved in. Water clarity was good as well. Site selections were based on previously known AIS locations as well as bays and points that would be susceptible to pioneer AIS populations.

According to the Wisconsin DNR records, Long Lake is known to have purple loosestrife, banded mystery snails, flowering rush and zebra mussels (see pictures below). The boat landing and 6 nearshore, targeted, sites were selected for the ED survey are shown in Figure 2. Boat landings are surveyed more thoroughly as these are most likely the points of introduction for many AIS. Zebra mussels were found at the boat landing however, no new AIS were found at this location. Zebra mussels were also found at sites 1, 3 and 4, as well as other observed locations during the shoreline meander. Zebra mussels appeared to be in moderate abundance this year. In 2024, mussels were found in fair abundance on woody debris, rocks and aquatic plants. During the 2025 survey zebra mussels were found during most rake collections. During this 2026 survey zebra mussels were commonly observed on rocks, woody debris and in small clusters on the lake bottom. However, none were found on rake collections. Purple loosestrife was not observed but may have been missed since it flowers later in the summer (July/August). Banded mystery snails were seen throughout the lake during the meander portion of the survey though none were observed at the specific monitoring sites. See Table 1 for the results of the survey. No new AIS were observed.

Purple loosestrife

Banded mystery snail

Zebra mussel

Flowering Rush

Previously, a patch of flowering rush has been observed in shallow water near shore on the northwest side of the lake (Site #5, 44.218877, -89.13521). Extra attention has been given to this site to try and find any new growth after the plants were removed in 2023. No new plants were observed in 2024. One plant was observed and removed in 2025. No plants were observed in 2026. Continued monitoring of this location is recommended to detect and remove any early growth of flowering rush. Below left: 2022 location, Center: 2025 single plant, Right: 2025 plant removed.

Native Watermilfoils

Previous concerns over possible EWM locations were again focused on. During the shoreline meander, locations of northern watermilfoil and whorled watermilfoil, both native species, were found. This is important to note as they are easily misidentified as Eurasian watermilfoil (see pictures below). No Eurasian watermilfoil was found at any locations during the 2026 survey.

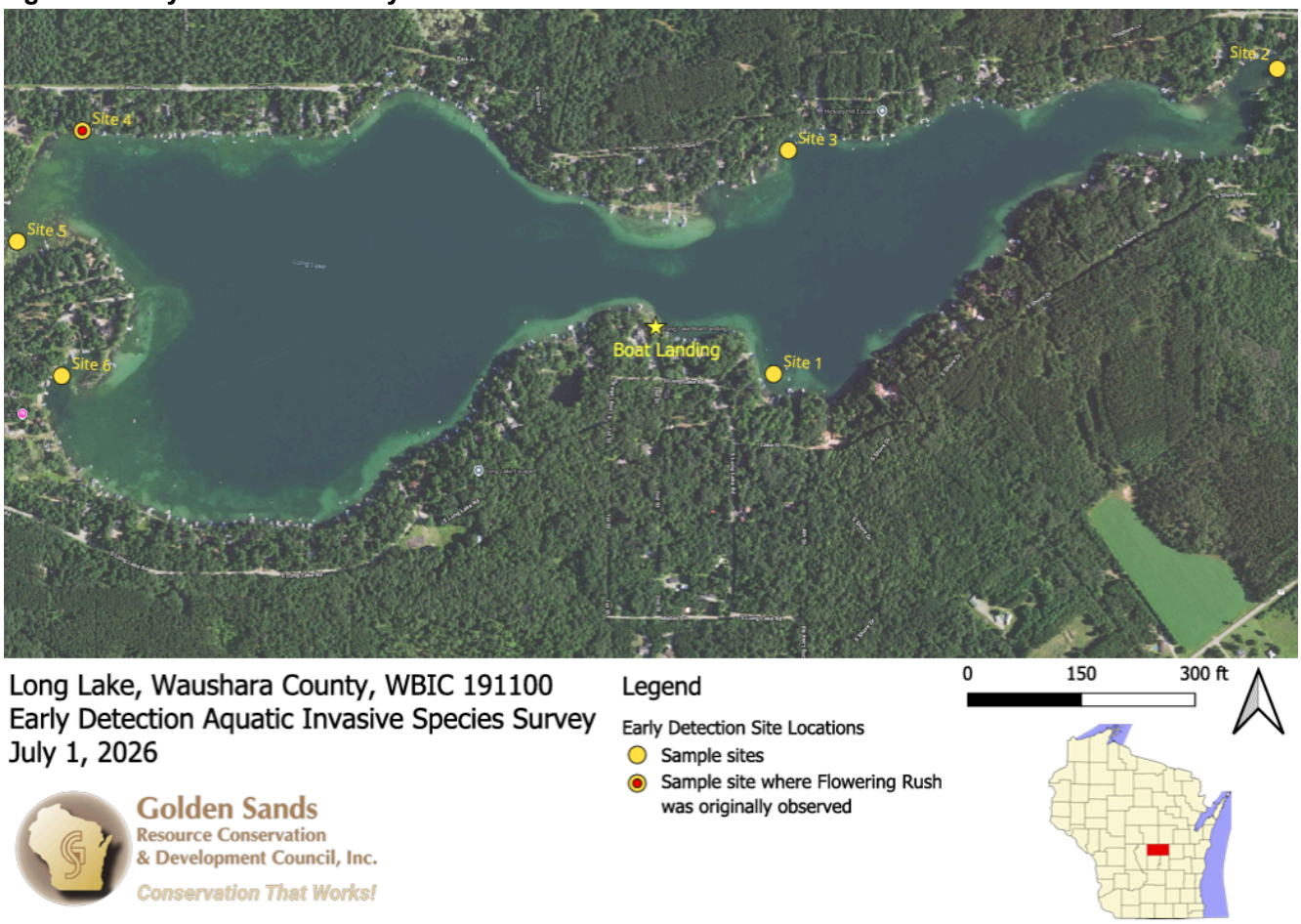
Eurasian watermilfoil (left) has 12+ leaflets per leaf, while native milfoils (right) tend to have less than 12 leaflets per leaf.

Northern watermilfoil (native)

Table 1: Early Detection Summary

Site	AIS Found	Species Name	New Finding on Long Lake?
Boat Landing	Yes	Zebra Mussels	No
Site #1	Yes	Zebra Mussels	No
Site #2	No	—	—
Site #3	Yes	Zebra mussels	No
Site #4	Yes	Zebra mussels	No
Site #5	No	—	—
Site #6	No	—	—

Figure 2: Early Detection Survey Site Locations



If there are any questions regarding the ED survey or results, please contact Golden Sands RC&D, Chris Hamerla, chris.hamerla@goldensandsrcd.org (715) 343-6215, ext 704.