Land & Water Conservation Department

Big Carr Lake

Oneida County, Wisconsin

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Big Carr Lake AIS Monitoring and Water Clarity Report

Field Date:	August 17, 2022
WBIC:	971600
Previous AIS Findings:	Chinese Mystery Snail, Purple Loosestrife, Rusty Crayfish
New AIS Findings:	No new AIS found.
Field Crew:	Aubrey Nycz, Lead AIS Project Assistant, and Madeline Hetland, AIS Project Assistant, Oneida County Land and Water Conservation Department
Report By:	Madeline Hetland

Purpose: Water is Wisconsin's most precious resource. It provides an essential lifeline between wildlife, recreation, public trust resources, agriculture, industry, health and safety, and environmental, urban and rural interests throughout the state. With a growing population and a treasured supply of fresh water, the protection of water for designated and beneficial uses is of paramount importance.

Each year, the Oneida County Aquatic Invasive Species (AIS) Program staff conducts AIS early detection monitoring and baseline water quality monitoring in Oneida County waterbodies. In addition, staff conducts AIS monitoring at boat landings, rivers, streams, wetlands, roadsides, culverts, and Organisms in Trade. Monitoring takes place from June through September of each year.

AIS early detection monitoring is the most effective approach to locating pioneer populations of WI Chapter NR 40 regulated AIS, species not widely established, and newly introduced species to Wisconsin. Early detection of AIS is crucial for rapid response, containment, management, preventing their spread, and reducing management costs. Implementation of rapid response activities is vital in maintaining the stability of a waterbodies ecosystem services, habitats, fisheries, recreational opportunities, property values, economy, and human health.

Water quality monitoring provides information on the physical, chemical, and biological characteristics of water. Monitoring aims at assessing the environmental state, detecting trends, and identifying potential problems in the water or watershed. The state of water quality is the result of complex natural and manmade conditions and the consequent of those interactions over time. Evaluating trends determines whether water quality is changing relative to land use and natural conditions. Water quality data provides important and useful information to lake groups, local and regional resource managers, community stakeholders, and provides guidance

with protecting and enhancing our waters, watersheds and development to new approaches to water quality management.

Our monitoring program is in collaboration with the DNR, UW Extension's Citizens Lake Monitoring Network Program, and Great Lakes Indian Fish Wildlife Commission. All AIS staff are trained in the in the DNR's AIS monitoring, identification, collection, verification, reporting, and decontamination protocols.

Data Collected: AIS identification, live specimens, photos, population densities, distribution, locations and GPS coordinates. Other observations may include species size, characteristics, and impact to native habitat. Water quality data includes Secchi disc, dissolved oxygen, temperature, water characteristics, and GPS coordinates.

Areas Observed: Perimeter of lake's littoral zone, inlets and outlets, around culverts, under and around docks and piers, and other areas identified as most vulnerable to the introduction of AIS.

Methodology: Searching for AIS in the water and along the shoreline is achieved by slowly canoeing around the entire lake's littoral zone, meandering between shallow and maximum rooting depth or 100' from shore (whichever comes first). Additionally, targeted sites considered high risk of invasive species introductions, such as boat landings, access points, parks, beaches, and inlets receive comprehensive AIS monitoring. Several methods and tools are utilized to achieve the survey: survey from the canoe, walking along the shoreline and shallows, using aqua view scopes, snorkeling to examine underwater solid surfaces, sifting through vegetation, and analyzing plant rake samples, veliger tows, and D-net sediment samples.

Targeted Chapter NR40 Invasive Species Include: Asian clams, banded mystery snails, Chinese mystery snails, Faucet Snails, New Zealand mudsnail, quagga mussels, zebra mussels, rusty crayfish, spiny waterfleas, Eurasian watermilfoil, curly leaf pondweed, flowering rush, non-native phragmites, purple loosestrife, yellow iris, and variegated reed manna grass (Glyceria Maxima 'Variegated').

Other priority species include: red swamp crayfish, Japanese knotweed, Japanese hops, European frog-bit, yellow floating heart, water chestnut, Brazilian waterweed, Hydrilla, fanwort, parrot feather, water, hyacinth, water lettuce, and rock snot.

Big Carr Lake Data: Big Carr Lake, located in the Town of Lake Tomahawk, Oneida County, is a 209-acre seepage lake with a maximum depth of 75 feet (**Figure 1.**). There is one public boat landing located in the northeastern corner off of Highway D. (**Figure 2**). The substrate is 45% sand, 15% gravel, 25% rock, and 15% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources (WDNR) reports that the lake has Musky, Panfish, Largemouth Bass, Smallmouth Bass, Trout, and Walleye.

Field Notes (weather): The weather while conducting research on Big Carr Lake was sunny and calm. The air temperature was 79 degrees Fahrenheit. There was little to no wind.

Field Notes (AIS monitoring): We completed a visual meander survey around the entire lake's perimeter, searching both sides of the canoe, and moving in and out between various water depths. Polarized sunglasses were used to aide in looking at the bottom substrate. Throughout our monitoring, we made note of the plants and animals we observed in the process (see **Table 1**). We stopped at five targeted search sites and did multiple rake tosses to check for plant growth at each location, while also still looking in the water at various depth. The five search sites were selected based on areas that seemed to receive more boat or foot traffic. Please see **Figure 2** for more information. No new aquatic invasive species were observed in Big Carr Lake, but the previously identified Purple Loosestrife has continued to spread across the northern shoreline and down the western shoreline too. We also observed the presence of Chinese Mystery Snails. Rusty Crayfish were not observed but are also present in the lake. Information on these species can be found in the *AIS Quick Guide* in **Appendix A.**

Field Notes (water quality monitoring): To observe the water clarity and quality on Big Carr Lake, we used a depth finder and maps indicating where data had been collected in the past to locate the deep hole. We used a Secchi disk to measure water clarity and a dissolved oxygen meter to measure water quality. Oxygen is needed for a healthy fish population, and also for plants to respire at night. The measurements from the dissolved oxygen meter can tell us if the organisms in the lake are under stress. The dissolved oxygen measurements on Big Carr Lake looked healthy. These measurements can be found in **Table 2**. The Secchi disk reading was at 13 feet out of a maximum depth of 81 feet. While the WDNR has the maximum depth listed at 75 feet, we recorded 81 feet on our depth finder. The water level can fluctuate, as the principal source of water on this lake is precipitation or runoff. Changes in water levels over time are expected.

Figure 1. Map of Oneida County, WI with Big Carr Lake circled in red.

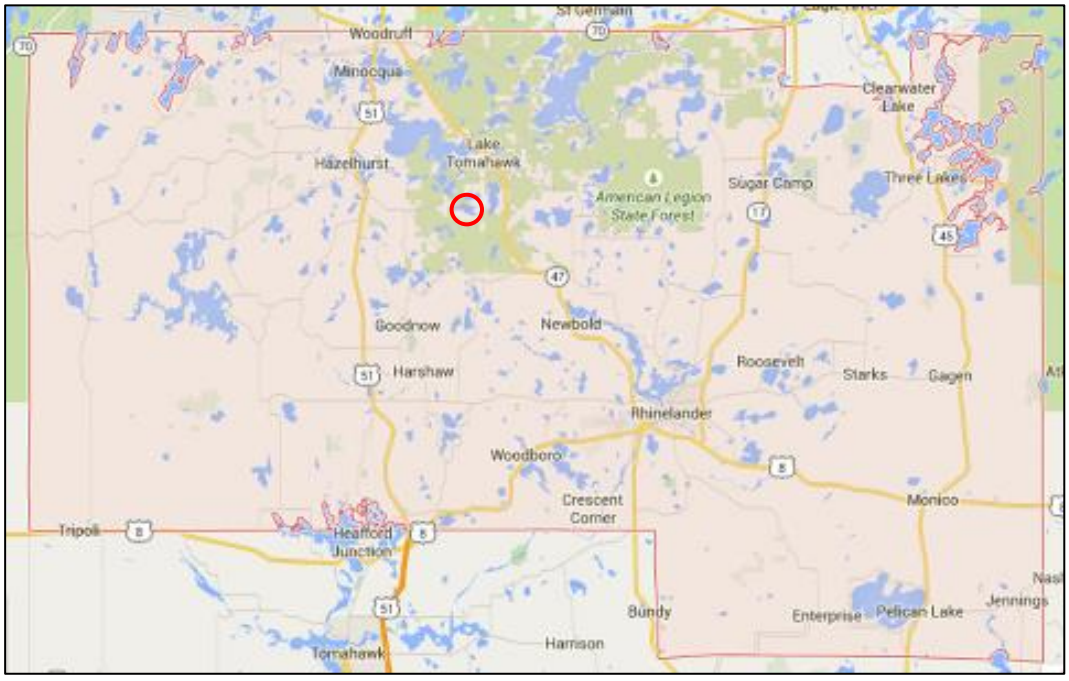

Figure 2. Map of Big Carr Lake.

Map Key

Boat Landing

Location of dissolved oxygen and Secchi disk reading
Latitude: -89.631948
Longitude: -89.631948

Rake Toss Locations

Table 1. Common plants found in Big Carr Lake while monitoring.

Bullhead Pond Lily *(Nuphar variegata)*

Description: Heart shaped leaves up to 40cm long, floating on surface. Has a cup-shaped yellow flower, often with dark patches at the base of each petal. Leaves originate from a thick, spongy rhizome, which can be uprooted.
Status: Native

Photo Credit: discoverlife.org

Lake Quillwort *(Isoetes lacustris)*

Description: An aquatic plant that forms a wide rosette. Leaves are stiff, dark green taper from the pale green-brown base.

Status: Native

Photo Credit: Shannon Sharp

Purple Loosestrife *(Lythrum salicaria)*

Description: A flowering plant with a square or 6-sided stem and smooth leaves. Flowers tend to be a pinkish purple with 6 petals.

Status: INVASIVE

Photo Credit: Dave Britton

Water Shield *(Brasenia schreberi)*

Description: An aquatic plant with stems up to 2 meters long. This plant has small floating leaves and reddish purple flowers that have 6-8 petals.

Status: Native

Photo Credit: Shannon Sharp

Wild Rice *(Zizania palustris)*

Description: A native pant that grows above the water, but is rooted is mucky sediment. Leaves are green in color, they grow in clusters, and they appear ribbon-like. Stalks can grow 3 to 10 feet tall.

Status: Native
Photo Credit: Susan Bronson

Table 2. Dissolved oxygen levels and temperatures at the deep hole.

Depth (Feet)	Temperature (ºF)	Percent of Dissolved Oxygen	Dissolved Oxygen Levels (mg/L)
5	72.8	107.5%	8.91
10	72.3	107.5%	8.94
15	72.0	104.8%	8.75
20	63.3	124.2%	11.4
25	49.5	108.5%	11.82
30	44.5	72.8%	8.47
35	42.9	46.6%	5.55
40	42.5	33.8%	4.04
45	41.8	9.7%	1.16
50	41.6	1.5%	0.17
55	41.4	0.6%	0.07
60	41.3	0.3%	0.03
65	41.2	0.0%	0.00
70	41.2	-0.0%	0.00
75	41.2	-0.2%	-0.02
80	41.2	-0.3%	-0.03

Resources: https://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=971600

Appendix A. *AIS Quick Guides*

Aquatic Invasive Species Quick Guide

Golden Sands Resource Conservation & Development Council, Inc.

Chinese Mystery Snail (*Cipangopaludina chinensis* Reeve)

Description: Chinese mystery snails are often large, up to nearly 3 inches tall. Shells are typically dark brown, and may have some dark vertical ridges near the opening. The lowermost whorl of the shell is usually much wider than the rest of the shell. At the opening of the shell, a thick, hardened plate called an operculum is able to seal the shell against predators or harmful chemicals in the water. Chinese mystery snails are capable of grazing algae from surfaces and filter-feeding on suspended algae particles.

North American Distribution: Scattered across North America, but they are most abundant in the eastern and central United States.

The Chinese mystery snail can be nearly 3 inches tall.

Chinese mystery snails have a tough plate called an operculum covering the shell opening.

Dispersal Vectors: Native to eastern Asia, Chinese mystery snails were first imported to the U.S. in the late 1800s as a food item in oriental markets. It is believed that some people may have "seeded" these snails into local waterways for later harvest. Chinese mystery snails are also introduced to water gardens for the purpose of clarifying the water and grazing algae from hard surfaces. At any time during summer and fall, each female may contain dozens of small snails at different stages of development. She occasionally gives birth to small batches of live young, complete with shells.

Ecological Impacts: Chinese mystery snails likely compete for food and resources with native snails and other grazers or filter-feeders. Some research studies suggest that impacts to native species may be insignificant. Chinese mystery snails serve as a secondary host for a trematode parasite that has been killing large numbers of waterfowl in the Midwestern U.S. Some larger animals like turtles or muskrats may occasionally feed on Chinese mystery snails.

Control Options: Manual removal of Chinese mystery snails remains the only effective method of control. Of course, the effect on the population depends on the number removed and the total population size. These snails prefer mucky, organic sediments, so manual removal is likely to be a difficult option in many areas.

Chemical control efforts tend to be unsuccessful and have unintended consequences to native snails and/or other animals. Chinese mystery snails can seal up their shells with their operculum, protecting them from unfavorable conditions like chemical pesticides. Most North American snails do not have this ability and would be harmed.

Juvenile Chinese mystery snails, just minutes old.

Additional Information:

Dillon, R. T. Jr., M. Ashton, M. Kohl, W. Reeves, T. Smith, T. Stewart & B. Watson 2013. *The freshwater gastropods of North America*. http://www.fwgna.org.

Global Invasive Species Database. *Bellamya chinensis*. http://www.issg.org/database/species/ecology.asp?si=1812&fr=1&sts=sss&lang=EN

Photo credit: Paul Skawinski

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Developed by Golden Sands Resource Conservation & Development (RC&D) Council, Inc. as part of an aquatic invasive species (AIS) education program, supported by an AIS grant from the Wisconsin Department of Natural Resources. CMS-1-14

Aquatic Invasive Species Quick Guide

Rusty Crayfish (*Orconectes rusticus* Girard)

Golden Sands Resource Conservation & Development Council, Inc.

Description: The rusty crayfish is a large crayfish of the family Cambaridae. Adults can reach six inches in length, including the claws. Most of the body is tan to light brown, but each side of the carapace has a rusty brown spot. Claws are large and typically have brightly colored tips above dark bands. Rusty crayfish are omnivores, feeding primarily on aquatic plants, snails, and other small invertebrates. They can commonly be found hiding under rocks, logs, and other debris. Rusty crayfish typically live 3-4 years.

North American Distribution: Rusty crayfish are most abundant in the western Great Lakes states, but have been documented from Minnesota and Iowa eastward to Maine, and in northern New Mexico.

Rusty crayfish are mostly light brown, with bright claw tips.

Each side of the carapace has a rusty brown spot.

Dispersal Vectors: Rusty crayfish are native to the Ohio River Basin, and were likely transported to the Midwest United States as bait by fishermen. Rusty crayfish quickly colonize lakes and streams by producing several hundred eggs per female each season. Eggs are protected under the female's tail until they hatch.

Ecological Impacts: Rusty crayfish are larger and more aggressive than most native crayfish, and are able to outcompete native species for food and habitat. Rusty crayfish consume large amounts of aquatic invertebrates, small fish, fish eggs, tadpoles, native crayfish, plants, and other aquatic life. They can hasten spread of Eurasian watermilfoil and other aggressive plants by cutting the stems, which then take root elsewhere.

Control Options: Manual trapping is effective for rusty crayfish. Always follow local trapping regulations. Modification of size limits of predator fish species can be effective. Walleye, smallmouth bass, largemouth bass, and yellow perch will consume young rusties. This strategy combined with trapping of large adults can reduce rusty crayfish populations.

An effective, safe pesticide for rusty crayfish has not been found. Although crayfish-selective pesticides exist, they are also harmful to native crayfish species.

An effective biological control agent has not been found. A parasite called *Microphallus* infects rusty crayfish (and other crayfish species), and is currently being researched. Lakes with abundant rusty crayfish are often found to have no *Microphallus* present.

Eggs and newly hatched young are held under the female's tail for protection.

Additional Information:

Hein, C.L., Roth, B.M., Ives, A.R., and M. Jake Vander Zanden. 2006. Fish predation and trapping for rusty crayfish (*Orconectes rusticus*) control: a whole-lake experiment. Can. J. Fish. Aquat. Sci. 63: 383-393.

Wisconsin Department of Natural Resources. Potential impacts to rusty crayfish (*Orconectes rusticus*) populations from a parasite, *Microphallus* sp.

Photo Credit: Paul Skawinski

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Aquatic Invasive Species Quick Guide

Purple Loosestrife (*Lythrum salicaria* L.)

Golden Sands Resource Conservation & Development Council, Inc.

Description: Purple loosestrife is a perennial wetland plant in the Lythraceae family, growing to about 8 feet tall. Stems are woody, and 4-sided (rarely 6-sided in very large plants). Leaves are opposite or occasionally in whorls of 3, with smooth margins and no leaf stalk. Each flower has six petals, and many whorls of these flowers bloom at the same time. Large plants may have many pink-purple flower spikes. Fruit capsules contain thousands of seeds each.

Purple loosestrife flowers have six wrinkled, pink-purple petals.

North American Distribution: Nearly all U.S. states and the southern Canadian provinces. Reported as far north as 65°N latitude.

Purple loosestrife produces tall flower spikes and stands up to 8 feet tall.

Dispersal Vectors: Purple loosestrife seeds probably arrived in North America from Europe, in heaps of soil used for ship ballast. It also may have been intentionally imported for ornamental use, medicinal use, or use by beekeepers. Large purple loosestrife plants can produce over two million wind-dispersed seeds per year.

Ecological Impacts: Purple loosestrife can rapidly colonize new areas, displacing native vegetative communities. In many wetlands, purple loosestrife has become the dominant species. Nesting habitat quality can decrease as the result of purple loosestrife introduction, reducing the waterfowl and shorebird communities. Some cultivars of purple loosestrife can also hybridize with our native winged loosestrife (*Lythrum alatum*), reducing the native's genetic integrity.

Control Options: Manual removal of small stands of purple loosestrife can be very effective. Plants in moist, soft substrate can often be pulled out by hand, including the roots. Very large plants may require some digging to remove the entire plant. Cutting flowerheads or seedheads can prevent seed dispersal in the short term, but plants will re-sprout from the roots and may produce new flower spikes.

Glyphosate or 2,4-D-based herbicides can be used; they should be approved for aquatic use to avoid unnecessary harm to the ecosystem. For scattered plants, herbicide is best applied with a small bottle and a wicking tip that can be used to "paint" herbicide onto the plants.
Cutting the stem near the base and "painting" the cut stem is often effective. Most states require chemical use permits for any herbicide treatments in standing water or wetland situations.

Purple loosestrife stems are woody and nearly square.

Biological control of purple loosestrife is a widely used, effective method of control. *Galerucella* beetles feed on purple loosestrife without negatively affecting native wetland plants. Many states and organizations offer free assistance to volunteers looking to raise *Galerucella* beetles for local release into infested wetlands.

Additional Information:

Mal, T.K., Lovett-Doust, J., Lovett-Doust, L., and Mulligan, G. A. 1992. The biology of Canadian weeds. 100. *Lythrum salicaria*. Can. J. Plant Sci. 72: 1305-1330

Wisconsin Department of Natural Resources. Purple loosestrife biocontrol. http://dnr.wi.gov/topic/invasives/loosestrife.html

Photo credit: Paul Skawinski

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Land & Water Conservation Department

Big Carr Lake AIS Boat Launch and Shoreline Surveillance Monitoring Report

WBIC:	971600
Previous AIS Findings:	Chinese Mystery Snails, Purple Loosestrife, Rusty Crayfish
New AIS Findings:	None
Field Date:	May 31, 2020
Field Crew:	Aubrey Nycz, Lead AIS Project Assistant, Oneida County Land and Water Conservation Department
Report By:	Aubrey Nycz

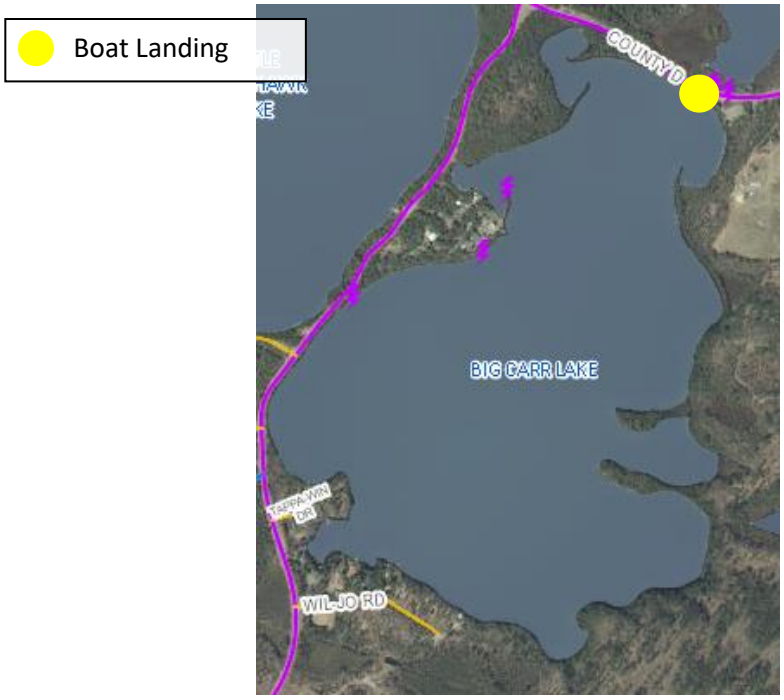
On May 31, 2020, Aubrey Nycz, AIS Lead Project Assistant, visited the Big Carr Lake boat landing located on Country Highway D, in Oneida County, to perform and AIS landing check (Figure 1). The main duties performed at AIS landing checks are to inspect shoreline vegetation, shallow aquatic vegetation, deeper aquatic vegetation (via rake), look for invasive animals, and replace old signs if needed. A GPS unit can be used to mark where the AIS check is performed, and to also mark invasive organisms if found. For today's landing check, I used the GPS on my phone to gather coordinates.

Big Carr Lake is a 209 acre seepage lake with one public boat landing. Our team has monitored this lake in the past, and we have always observed large amounts of purple loosestrife at the boat landing. I chose to monitor this landing again this year, as our team will be looking at sites to release purple loosestrife beetles at in the coming weeks. The shoreline at the Big Carr Lake boat landing is a combination of sand and rock, and it holds a variety of native plants.

Big Carr Lake contains various kinds of invasive species. According to the Wisconsin Department of Natural Resources, Chinese Mystery Snails, Purple Loosestrife, and Rusty Crayfish are already present in the lake. While monitoring at the boat landing, I noticed some small purple loosestrife plants growing along the shoreline, as well as some purple loosestrife plants growing on the opposite side of the boat landing (facing Little Carr Lake). There was some beetle chew on the plants already. I will return to this site within the next couple of weeks to begin the removal process of the plants.

Figure 1. Map of Oneida County, WI with Big Carr Lake circled in red.

Figure 2. AIS Boat Launch and Shoreline Surveillance Monitoring Location.



Resources: https://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=971600

Big Carr Lake AIS Monitoring and Water Clarity Report

Field Date:	August 9th, 2017
WBIC:	971600
Previous AIS Findings:	Chinese Mystery Snail, Freshwater Jellyfish, Purple Loosestrife, Rusty Crayfish
New AIS Findings:	None
Field Crew:	Aubrey Nycz, AIS Project Leader, and Thomas Boisvert, AIS Project Assistant, Oneida County Land and Water Conservation Department
Report By:	Thomas Boisvert

On August 9th, 2017, Aubrey and I went to Big Carr Lake to implement AIS monitoring along with water clarity and quality assessments. Big Carr Lake is a 209 acre oligotrophic lake located in Oneida County, and has one public boat launch. The lake is also part of both the Two Lakes Pine-Oak State Natural Area and the Tomahawk Lake Hemlocks State Natural Area, along with the American Legion State Forest. Because of this, over half of the lake is not built up with housing, and the shoreline looks natural in many areas. Big Carr Lake has a maximum depth of 75 feet, and the substrate is reported to be 45% sand, 15% gravel, 25% rock, and 15% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources reports that the lake has musky, largemouth bass, smallmouth bass, trout, walleye, and panfish present. We observed this firsthand as very large bluegill, crappie, and largemouth bass were seen along the shoreline.

The weather while conducting research on Big Carr Lake was not ideal. The outside temperature was 70 degrees Fahrenheit, the sky was cloudy, there was moderate to high wind, and the water clarity was good. At times, the wind and waves made maneuvering our canoe difficult. We had to stop the dissolved oxygen readings at 18 feet due to the cord becoming angled in the water from the wind pushing us too fast. The wind and waves also made obtaining our Secchi disk reading challenging too.

When conducting our AIS lake survey, Aubrey and I did a complete shoreline scan while meandering in and out between different depths. We looked on the shoreline itself and also in the water, noting the plants and animals that we observed in the process. When possible, we got in the water and used the aquascopes to have a closer look at the bottom composition.

To observe the water clarity and quality of Big Carr Lake, Aubrey and I went to the deep hole on the south side of the lake. After locating the deep hole with our sonar unit, we used a Secchi disk to measure clarity and a dissolved oxygen meter to measure water health. Oxygen is needed for a healthy fish population, and also for plants to respire at night as well. The measurements from the dissolved oxygen meter can tell us if the organisms in the lake would be under stress. Thankfully, both of these measurements were relatively average in nature, and there should be no concern for the health of Big Carr Lake. The Secchi disk reading was 8 feet, and the dissolved oxygen readings can be found in table 2.

Aubrey and I did observe Purple Loosestrife on Big Carr Lake, however, this invasive was already known to have been established here. We were glad to see that no new invasive species were present at this time, however, the Purple Loosestrife will need to be controlled as it seems to be spreading rapidly. Besides the Purple Loosestrife, the lake seems to be healthy, and some native plants were present and thriving. There were not many aquatic plants due to the sandy/rocky substrate of this lake, but the three most common plants we observed were Purple Loosestrife, Water Smartweed, and Bullhead Pond Lilies. These plants can be seen below in table 1.

Findings: Taken 12:00 p.m. – 2:00 p.m. on August 9th, 2017

Aquatic Invasive Species: We did not find any new invasive species along the perimeter of Big Carr Lake.

Secchi: The Secchi reading on this lake was 8 feet out of a 75 foot maximum depth. The water color was a bluish color, and was clear when glancing across the lake.

Dissolved Oxygen: These measurements can be seen in Table 2.

Figure 1. Map of Oneida County, WI with Big Carr Lake circled in red (approximate location)

Figure 2. Map of Big Carr Lake with the location of the Secchi disk reading labeled.

Deep hole & location of Secchi disk reading

Secchi Disk Readings:
Big Carr Lake - Deep Hole
Coordinates - Not Available

Public Boat Landing

Table 1. Plants found in Big Carr Lake when monitoring.

Common Name Scientific Plant Name	Description	Image
Bullhead Pond Lily (Spatterdock) *Nuphar variegata*	An aquatic plant with heart-shaped leaves that can grow to be 15 inches long. This plant also has a yellow, cup-shaped flower. This plant is native.	 *Photo Credit: Jomegat's Weblog*
Purple Loosestrife *Lythrum salicaria*	A flowering plant with a square or 6-sided stem and smooth leaves. Flowers tend to be a pinkish purple with 6 petals. This plant is invasive!	 *Photo Credit: Dave Britton*
Water Smartweed *Persicaria amphibia*	An aquatic, floating plant with swollen leaf nodes. Leaves tend to be smooth and rounded. Water smartweed has pink flowers that are raised a few inches above the water. This plant is native.	 *Photo Credit: Superior National Forest/CCSA*

Table 2. Dissolved oxygen levels and temperatures at the deep hole.

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Temperature (F)	Percent Dissolved Oxygen
2	8.76	72.7°	106.8%
4	8.82	72.2°	107.0%
6	8.83	72.1°	107.0%
8	8.82	72.1°	106.9%
10	8.83	72.0°	106.9%
12	8.83	71.9°	106.8%
14	8.82	71.5°	100.2%
16	8.82	70.9°	105.5%
18	9.84	68.8°	115.2%

Big Carr Lake Purple Loosestrife Control Report

WBIC:	971600
AIS in Waterbody	Chinese Mystery Snail, Freshwater Jellyfish, Purple Loosestrife, Rusty Crawfish
Field Date:	July 20th, 2017
Field Crew:	Aubrey Nycz, AIS Project Leader, Thomas Boisvert, AIS Project Assistant, Derek Thorn, AIS Project Assistant, Oneida County Land and Water Conservation Department
Report by:	Thomas Boisvert

On July 20th, 2017, Aubrey Nycz, AIS Project Leader, Thomas Boisvert, AIS Project Assistant, and Derek Thorn, AIS Project Assistant, headed to Big Carr Lake to implement Purple Loosestrife (P.L.) control. The main duties the Oneida County team performs while implementing P.L. control is to clip flowering plants, introduce beetles, mark the entire affected area with GPS programming, and look at the surrounding areas for spreading plants.

This particular P.L. site was along County Highway D, on the shoreline of Big Carr Lake. The patches of P.L. could be clearly seen along the southern side of the highway. This area had beetles introduced in years' past, and beetle chew was evident on some of the P.L. leaves in the area. This affected area also connected to Little Carr Lake on the other side of the Highway. The two waterbodies are connected via culverts that flow underneath County Highway D.

Once at the site, the Oneida County AIS team clipped all visible flowers, introduced beetles at various locations, marked the entire area with a GPS unit, and looked at the surrounding area for spreading plants. Each particular area where the beetles were introduced was also marked on the GPS unit as well. This information can be found on Oneida County's GIS program.

Findings:

Aquatic Invasive Species:

The patches of P.L. on Big Carr Lake appeared to have stayed the same size since last year's beetle control efforts.

Figure 1. Map of the area affected by Purple Loosestrife, identified by a purple line.

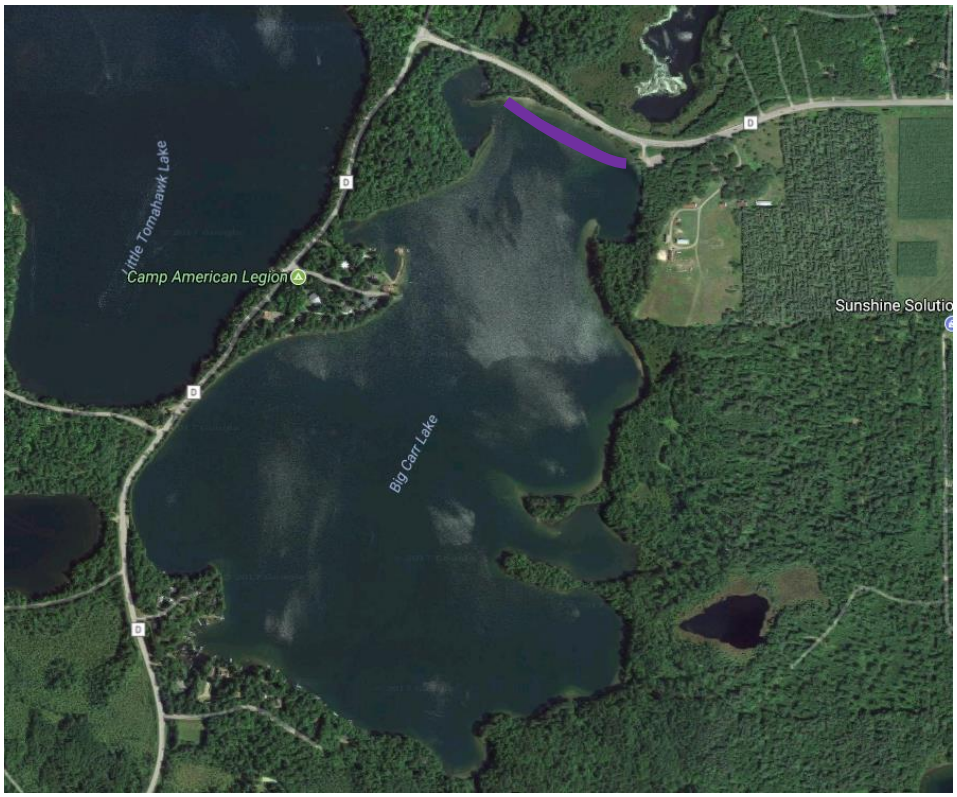


Figure 2. Map of Oneida County, WI with Big Carr Lake's approximate location circled in red.